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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, JANUARY 9, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of the Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meetings of December 19 and December 26, and of the special meeting of December 31, 1919, be approved, as printed, without being read.

Mr. Nance moved that the motion be laid on the table.

Mr. Nance subsequently withdrew his motion.

Mr. Lawley withdrew his original motion and moved that the minutes of the regular meetings of December 19 and 26, 1918, be approved as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented his report of money received and deposited with the Treasurer during the month of December, 1918, which was ordered published and filed, as follows:

CHICAGO, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of seventy-one thousand, one hundred seventy-eight and ninety-three hundredths ($71,178.93) dollars, during he month of December, 1918, from the following sources:

International Harvester Company, being refund of taxes paid on land they occupy under lease dated January 18, 1902		$ 4,927.75
James M. Dailey (Former Chairman Committee on Finance), return of Emergency Fund		1,500.00
United States Crushed Stone Company, in payment for judgment notes as follows:		
Dated January 2, 1918, due December 1, 1918	$ 333.33	
Dated January 2, 1918, due January 1, 1919	333.37	
		666.70
Atchison, Topeka & Santa Fe Railway Company, in payment for stone removed from the spoil banks at Romeo, Ill., during August and September, 1918, as follows: 3357.2 cubic yds. at .05c per yard		167.86
W. T. Lynch, Record Clerk, for money received from sundry persons for personal telephone service		3.30
Fred J. Ringley Company, refund of amount overpaid them on voucher No. 98445, their bill dated October 18, 1918		.50
The Coal Products Mfg. Company, semi-annual rental for strip of land in Will county, for period covering from January 1 to June 30, 1919		1,783.50
The Kettler-Elliott Erection Company, semi-annual rental under lease dated June 1, 1918, for period covering December 1, 1918, to June 1, 1919		1,645.87
Van Fleet Wood Working Company, monthly rental for premises at No. 1 Jefferson street, Joliet, Ill., being rental for months of December, 1917, and January, 1918		150.00
Peter Molenaar, semi-annual rental for land, lease dates March 10, 1909, for period covering from June 30, 1918, to January 1, 1919	$ 249.73	
Balance account amount due December 31, 1917	1.73	
Balance account amount due June 30, 1918	1.73	
Semi-annual rental on supplementary lease for 12 acres adjoining above for period covering from June 30, 1918, to January 1, 1919	30.00	
		283.19
Alex Karres, monthly rental of premises at 1028 Central street, Evanston, Ill., for the month of June, 1918		40.00
Sundry consumers, for electric power and light		$ 47,936.08
South Park Commissioners, for power and light for month of October, 1918	3,219.39	
County of Cook—		
For power and light for May, July and August, 1918	$1,983.72	
Amounts carried forward	$ 51,155.47	$ 11,168.67

Amounts brought forward		$ 51,155.47	$11,168.67
Interest and depreciation for May, July and August, 1918	470.16		
		2,453.88	
Commissioners of Lincoln Park—			
For power and light for October, 1918	$1,359.52		
Interest and depreciation for October, 1918	69.45		
		1,428.97	
West Chicago Park Commissioners—			
For power and light for October, 1918	$1,184.63		
Interest and depreciation for October, 1918	112.14		
		1,296.77	
Village of Dolton—			
For power and light for October, 1918	$ 669.60		
Interest and depreciation for October, 1918	18.65		
		688.25	
Village of Maywood—			
For power and light for October, 1918	$ 547.56		
Interest and depreciation for October, 1918	44.65		
		592.21	
Town of Cicero, for power and light for October, 1918		499.80	
Village of Summit—			
For power and light for October, 1918	$ 313.69		
Interest and depreciation for October, 1918	32.98		
		346.67	
City of Berwyn—			
For power and light for September, 1918	$ 206.73		
Interest and depreciation for September, 1918	24.34		
		231.07	
Village of Evergreen Park—			
For power and light for October, 1918	$ 230.19		
Interest and depreciation for October, 1918	26.87		
		257.06	
Village of Bellwood, for power and light for January, February and March, 1918		21.34	
War Recreation Board of Illinois, for power and light from October 8 to October 31, 1918		18.60	
City of Blue Island, for power and light for October, 1918		17.06	
Wilmette Park District—			
For power and light for October, 1918	$ 9.15		
Interest and depreciation for October, 1918	5.00		
		14.15	
Village of Stickney, for power and light for October, 1918		12.66	
State of Illinois, for power and light for October, 1918		7.15	
Village of Lyons, for power and light for October, 1918		3.49	
Chicago, Burlington & Quincy R. R. Company, re-routing circuit and additional charges for same at Kedzie avenue		630.39	
W. A. Jackson Company, purchase of 210 feet of 1-4 conduit cable		192.90	
Amounts carried forward		$ 59,867.89	$ 11,168.67

Amounts brought forward	$ 59,867.89	$ 11,168.67
Sterling Drop Forge Works, for rental of poles from October 1, 1917, to November 30, 1918	35.00	
Chicago Herald and Examiner, installing service at Grant Park	56.13	
The Texas Company, return of empty barrels	26.95	
Manhattan Rubber Mfg. Company, return of 16 lbs. No. 1 hydraulic packing	20.00	
Jas. J. Finneran, personal telephone calls	2.15	
Erie Railroad Company, refund of duplicate payment on freight invoice March 13, 1918, our order No. 867	1.84	
S. H. Reed, personal telephone calls	.30	
		60,010.26
Total		$ 71,178.93

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by the attached receipt.

Respectfully submitted,

JOHN MCGILLEN,
Clerk.

CHICAGO, January 9, 1919.

$71,178.93.

Received from John McGillen, Clerk, the sum of seventy-one thousand, one hundred seventy-eight and ninety-three hundredths ($71,178.93) dollars, on the dates and in amounts as follows:

December 2	$ 3,414.57
December 3	1,677.77
December 4	121.85
December 5	6,207.01
December 6	637.96
December 7	171.86
December 9	23.26
December 10	1,769.28
December 11	1,557.89
December 12	2,514.22
December 13	7,231.35
December 14	1,063.34
December 16	1,478.16
December 17	1,041.51
December 18	5,984.68
December 19	9,615.18
December 20	5,948.52
December 21	5,743.23
December 23	4,321.45
December 24	1,318.10
December 26	426.08
December 27	322.97
December 28	52.24
December 30	105.51
December 31	8,430.94
Total	$ 71,178.93

to be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

Electrical Department	$ 60,010.26
Land Revenue	3,902.56
Taxes on District Property	4,927.75
Jas. M. Dailey, Chairman Committee on Finance	1,500.00
Bills Receivable	666.70
Atchison, Topeka & Santa Fe R. R. Company	167.86
Miscellaneous Engineering, Operating Expense, Maintenance and Operation	3.30
Clerical Department	.50
Total	$ 71,178.93

Respectfully submitted,

GEORGE M. REYNOLDS,

Treasurer, The Sanitary District of Chicago.

The Clerk presented the report of the Chief Engineer for the month of July, 1918, which was ordered published and filed, as follows:

CHICAGO, August 1, 1918.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of July, 1918, giving the detailed operation of the same.

CONSTRUCTION.

Union Loop Power House Dock.

The Brennan Construction Company, contractors, employed by the Northwestern Elevated Railroad Company, on the construction of a new dock on the cut-off line in front of the Union Loop Power House, continued operation throughout the month. The work done consisted of concreting the new wall of the power house east of the cut-off line.

NORTH SHORE CHANNEL.

Removal of Spoil Bank.

The National Brick Company removed 10,273 cu. yds. of material from the east bank of this channel between Brown and West Railroad avenues, from July 5th to 31st.

BRIDGES.

Lincoln Street Bridge.

The Sanitary District organization continued the work of underpinning the east abutment throughout the month. The south cylinder was completed and two anchor rods were placed from the abutment to a concrete "dead man" about fifty feet from the abutment.

CALUMET-SAG CHANNEL.

Section 1.

J. O. Heyworth, contractor for this section, continued operations throughout the month. Dragline No. 2 on the south berm continued excavating glacial drift in the channel between stations 937+50 and 970+50 (Main Channel stations), working two 10-hour shifts per day throughout the month. The total output was 55,000 cu. yds. of glacial drift. Drilling rock and blasting was carried on in channel between stations 3+50 and 4+00 from the 27th to 31st, working one 10-hour shift per day. A total of 438 lineal feet of holes was drilled. Travelers were engaged on form work on the north wall between stations 3+00 and 6+00, and on the south wall between stations 3+00 and 7+00 from the 1st to the 22nd. Concrete mixers and locomotive crane were engaged in concreting the walls between stations 3+50 and 9+00 from the 1st to the 20th, working one 10-hour shift per day. A

total of 2,990 cu. yds. of No. 2 concrete was placed. Backfilling walls was carried on by locomotive crane between stations 8+00 and 12+50 from the 25th to 31st, working one 10-hour shift per day. Three electric pumps were engaged in pumping channel at station 28+00, working two 12-hour shifts per day throughout the month. Miscellaneous work was carried on as follows: Finishing off retaining wall from the 1st to 31st; backfilling by hand between stations 26+00 and 53+00 from the 1st to 31st; building fences at Archer Road bridge on the 30th and 31st; making reinforcing rods on the 26th; cleaning up bottom of channel from the 19th to 31st. Force Account work was carried on as follows: Excavating for snubbing posts along the Main Channel walls from the 18th to 29th; unloading snubbing posts at Lambert Station on the 17th; grading road at Archer Road bridge on the 13th. An average daily force of 68.3 men was employed. At the end of the month 85.5 per cent of the total estimated value of the contract was completed.

Sections 2 to 12.

Pumping Contract.

Pumping channel for Sections 2 to 12, inclusive, was carried on by force account by J. O. Heyworth, the contractor for Section 1, throughout the month.

Section 5.

J. O. Heyworth, contractor for the construction of Section 1 under supplemental agreement dated May 9, 1918, was ordered by the Chief Engineer to drive a triple line of sheet piling south of the feeder between McLaughry Road and W. 82nd street to stop the underground seepage into the channel. The work was carried on from the 3rd to the 23rd. The bridge over the north drain ditch at McLaughry Road was repaired on the 10th by the contractor.

Rip-Rap Contract, Sections 7 and 8.

The contractor continued operations throughout the month. All work was carried on in one 10-hour shift per day. Dragline No. 4 on the north berm was engaged as follows: Excavating rock in channel for rip-rap between stations 525+50 and 524+00 from the 1st to 7th; rehandling spoil between same stations from the 8th to 10th, and at station 525+50 on the 10th, 22nd and 23rd; cleaning out channel cut between stations 525+50 and 523+25 from the 24th to 28th; excavating outfall ditch at station 523+25 on the 29th and 30th. An average of three teams was engaged in hauling stone and coal throughout the month. Men were engaged in laying rip-rap, loading and unloading rock throughout the month. An average daily force of 20.7 men was employed. At the end of the month 99.7 per cent of the total estimated value of the contract was completed.

Section 12.

A. Guthrie & Co., contractors for the construction of Section 13, engaged an average force of 9.5 men on the following work: Cleaning out ditch to drain low land lying south of channel and north of Broadway and east and west of Francisco avenue from the 20th to 25th; building concrete outlet to channel for east ditch on the 26th and 27th and removing forms from same on the 31st. One team was engaged in hauling material for outlet from Section 13 on the 23rd and 24th. All work was carried on in one 10-hour shift per day, except on the 31st, when the work was carried on in one 5-hour shift.

Section 13.

The contractor for this section continued operations throughout the month. Concreting plant was engaged in placing concrete for the north and south retaining walls throughout the month, working between stations 772+40 and 780+26 on the north wall, and be-

tween stations 760+00 and 778+72 on the south wall. A total of 950.59 cu. yds. of No. 1 concrete and 5,972.99 cu. yds. of No. 2 concrete was placed. Hand work was carried on as follows: Cleaning up glacial drift slide in channel south face between stations 775+25 and 774+00 on the 10th and 11th; on the north face at station 775+50 on the 12th, at station 774+00 on the 15th, at station 776+00 on the 17th and 30th, and on the south face at station 776+00 on the 31st. Finishing off north wall at station 786+00 on the 1st, at station 774+50 on the 2nd and between station 780+00 and 779+00 on the 26th and 27th; on the south wall at station 768+00 on the 17th and station 770+00 on the 22nd and station 778+00 on the 25th. At 7 p. m. on July 23rd the Division street sewer broke north of the channel, due to heavy rain. The water was stopped from flowing into channel at 10 P. M.; 41 men worked 4 hours repairing the break. Pumping channel was carried on at station 761+50, working one 10-hour shift per day from the 1st to the 5th and 22nd to 31st, and at station 782+00 working one 7-hour shift per day throughout the month. An average daily force of 46.9 men was employed. About 54.7 per cent of the total estimated value of the contract was completed at the end of the month.

Section 14.

The contractor continued operations throughout the month. All work was carried on in one 10-hour shift per day except pumping channel, which was carried on at station 844+25, working one 7-hour shift per day throughout the month, and mixing concrete which was carried on in one 7-hour shift per day. Backfilling behind south retaining wall between stations 819+00 and 822+00 from the 1st to 3rd and 20th to 22nd by dragline No. 4. Grading Controlling Works road and approach to bridge on the 12th, 13th, 16th and 19th by dragline No. 4. Excavating glacial drift in channel east of south curved wall between stations 852+00 and 845+75 from the 1st to 31st. The total output was 5463 cu. yds. of glacial drift. Concrete mixer engaged in mixing concrete for Morgan Park sewer from the 15th to 17th; for sewer discharge chamber on the 18th, 19th and 30th; for Controlling Works Road bridge floor on the 29th. The following hand work was carried on: Grading spoil area on south berm between stations 838+00 and 846+00 from the 1st to 18th and 29th to 31st; cleaning out north drainage ditch between stations 818+00 and 821+00 on the 8th and 9th. A force of 16 men was engaged in the folowing work; Building concrete forms for sewage discharge chamber from the 1st to 12th, 15th to 17th, 22nd to 25th, and on the 31st; placing concrete on the 18th, 19th and 30th; excavating east cylinder for Morgan Park sewer on the 2nd; building forms for concrete on the 13th; concreting from the 15th to 20th; unloading ballast and grading tracks between Stony Creek and the Channel on the 1st, 2nd, from the 6th to 8th, 10th to 13th and 15th to 20th; unloading cinders and spreading same at Public Service Co. on the 3rd, 8th, 9th and 12th. An average daily force of 48.5 men was employed by A. Guthrie & Co. G. P. Nichols, electrical contractor, employed an average daily force of two men, working one 8-hour shift per day, in placing electrical conduit in the sewage discharge chamber from the 16th to 19th, and at the Controlling Works road bridge on the 22nd and 23rd and connecting lamp post boxes on the north wall on the 25th and 26th. The Kelly-Atkinson Construction Co. was engaged in constructing bumpers for sector gates from the 23rd to 27th and drilling holes for diagonal plates on the southeast sector gate on the 30th and 31st, working one 8-hour shift per day. At the end of the month 98.9 per

cent of the total estimated value of the contract was completed.

BRIDGES.

Chicago Street.

An average daily force of four men, working one 10-hour shift per day, was engaged in excavating for concrete cylinders for south abutment from the 9th to 12th.

Division Street.

An average daily force of 6.5 men, working one 10-hour shift per day, was engaged in building forms for north abutment from the 1st to 3rd, on the 5th, 6th, 8th to 12th, and for the south abutment from the 13th to 20th, 22nd to 25th, 27th and 29th to the 30th.

Chicago, Rock Island and Pacific Ry. Co. (Main Line) Bridge.

The Overland Construction Company employed an average daily force of four men in erecting temporary west bound track bridge over Western avenue, working one 9-hour shift per day on the 1st and 2nd.

The C., R. I. & P. Ry. employed a force of eight men and locomotive crane No. 95017, and locomotive No. 111, in placing girders for temporary west bound track bridge, working 4½ hours on the 2nd. A force of thirty men, engaged in unloading and piling material to be used for temporary west bound track bridge over Western avenue, working two hours on the 13th. An average daily force of two men was engaged in repairing said girders, working one 10-hour shift from the 17th to 26th, and placing ties and guards over bridge from the 22nd to 27th and on the 29th. A force of 35 men was engaged in unloading ties and material on the 25th. A force of 31 men was engaged in grading and placing switch ties for crossover from present to new west bound track from the 29th to 31st. An average daily force of seven men was engaged in rearranging track circuit (signal) on account of changes to track, working one 10-hour shift per day on the 30th and 31st.

The Chicago Interurban Traction Co. employed a force of four men in lowering trolley wires to pass under temporary C., R. I. & P. Ry. west bound track bridge, working 9 hours on the 2nd.

The Knickerbocker Roofing Co. employed an average daily force of 10 men in waterproofing the top surface of the new bridge No. 1, working one 8-hour shift per day on the 8th, 11th and 12th.

B. & O. and G. T. W. Crossing.

The contractor continued operations throughout the month. The work was carried on in various shifts of from 2 to 10 hours per day. Pumping channel was carried on at station 749+00 on the 2nd, 3rd, and from the 8th to 13th and 17th to 31st. Two teams were engaged grading for the G. T. W. and R. I. connecting track diversion at station 745+00 working one 10-hour shift per day from the 1st to 22nd. One team grading for G. T. W. track diversion north of the new B. & O. diverted tracks, working one 5-hour shift per day on the 23rd and 24th, and hauling timber for the temporary I. H. B. Ry. trestle on the 25th and 26th. Hand work was carried on as follows: Removing forms from south abutment of the new B. & O. C. T. bridge on the 1st and 2nd, and north abutment on the 3rd; repairing crossing of new B. & O. McCook line at Vermont street on the 2nd, excavating to place bents for temporary trestle from south bank to south abutment of new B. & O. C. C. division bridge from the 13th to 19th; capping piles and framing bents for temporary trestle from the 18th to 24th; building cribbing on south bank of channel at B. & O. C. C. division tracks to hold south bank slide on the 24th and 25th; placing stringers for west bound track from the 26th to 31st.

The B. & O. Ry. Co. employing an average daily force of 8.5 men was en-

gaged in building trestle at the north approach to the B. & O. C. C. division bridge, working one 10-hour shift per day from the 1st to 3rd and 8th to 11th.

The Strobel Steel Construction Co. employing an average daily force of 8 men, carried on the following work: Unloading steel from new B. & O. C. C. division bridge on the 9th and from the 19th to 23rd; driving piles for first bent at south approach of temporary trestle on the 16th and 17th, placing bents and stringers for temporary trestle from south bank to south abutment from the 26th to 31st. Work was carried on in various shifts of from 3½ to 8 hours per day. The following hand work was carried on: Building trestle for north and south new B. & O. C. C. division bridge on the 15th and 16th to the 24th, 26th to 31st; building cribbing to hold back south bank slide on the 25th.

Controllng Works Road Bridge.

Building forms for concrete floor on the 2nd and 3rd; placing reinforcing rods for floor from the 8th to 12th; concreting floor on the 29th.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 4.

Nash Bros., contractors, continued operations throughout the month. The work consisting largely of moving the equipment from the east side to the west side of the I. C. R. R. Excavation of the top cut by steam shovel was continued throughout the month, progressing from station 170+90 to station 178+20. At the Cottage Grove avenue crossing, street car service was interfered with on the 2nd. Excavation was completed on the 11th, the concrete was completed on the 13th, and the street car tracks replaced on the 20th. The dragline resumed excavation at South Park avenue and 104th street on the 24th and concreting was resumed on the 27th, the regular work progressing eastward from station 168+42 to station 168+91. An average daily force of 75.5 men and 20 teams was engaged throughout the month. The work was 76.8 per cent completed at the end of the month.

Contract Section No. 6.

Byrne Brothers' Dredging and Engineering Company, contractors, continued operations throughout the month. The work of moving the equipment to the north side of the C. & W. I. Ry. was carried on until the 22nd. The steam shovel resumed excavations of the top cut north of the railroad on the 5th and continued throughout the month. The dragline resumed excavation of the lower cut on the 22nd; concreting north of the C. & W. I. R. R. was begun on the 24th and progressed to station 68+78 at the end of the month. An average daily force of 81 men was employed throughout the month. The work was 73.5 per cent completed at the end of the month.

Contract Section No. 7.

T. J. Forschner Contracting Company, contractors, continued operations throughout the month. The regular work, consisting of excavation of the top cut by steam shovel and the bottom cut by dragline, and placing concrete section, was completed on the 18th. The work progressing from station 105+43 to the east end of the section at station 113+03. The street car service at Michigan avenue was discontinued on the 2nd and the service resumed on the 24th. The work on the special gaging chamber was completed on the 20th. This work completed all the main items on Contract No. 7. The balance of the month was occupied in backfilling and cleaning up, etc. An average daily force of 102 men and 1.5 teams was employed. The work was completed at the end of the month.

EVANSTON INTERCEPTING SEWER.

Contract Section No. 1.

Nash-Dowdle Company, contractors, continued operations throughout the

month. Work on the 7-ft. sewer in Orrington avenue was carried on in tunnel until the 7th, on which date the compressed air plant was dismantled and work continued by hand from the shaft at University place until the 16th, on which date the sewer was completed, except plastering and cleaning, which was continued throughout the month. The work progressing from station 10+38 to 9+70, and from station 27+16 to station 28+55. The 4½-foot sewer in Sheridan Road was completed on the 18th and the backfill completed on the 21st, the excavation being done by a Moore machine. The work progressed from station 49+27 to 54+18. The work on the 5-ft. sewer on the lake front was carried on throughout the month, the work consisting of excavation by means of a Parson's excavating machine and the placing of concrete section. The work progressed from station 4+38 to station 16+63.

The work of installing a pile driver for the placing of protections along the sewer on the lake front near Dempster street was begun on the 25th and continued throughout the month.

Work on the 3½-ft. sewer in Keeney street and Sheridan Road was started on the 6th and continued throughout the month. Excavation of top cut was carried on by steam shovel and the bottom cut by hand. Placing of the concrete sewer section was begun on the 24th and continued throughout the month. The work progressed from station 54+25 to station 56+34. The work of installing shaft and air locks for tunnel work on the 6-ft. sewer in Elmwood avenue was continued from the 1st to 29th, on which date the regular operations of tunneling were begun. About 100 ft. of 6-ft. sewer was completed at the end of the month.

Work of constructing a shaft for tunnel work on the 4½-ft. sewer in Custer avenue, south of Washington street, was begun on the 23rd and continued throughout the month. Work of constructing a shaft for tunnel work on the 6-ft. sewer in Lake street near Sheridan Road was continued to the 8th, on which date the regular tunneling operations were commenced and were continued intermittently throughout the month, the work progressing from station 99+14 to 99+65. On the outfall of Lake street and the North Shore Channel the concrete work was placed complete on the 14th; concrete blocks as slope paving were set complete on the 20th, and the cofferdam was removed on the 25th, completing all work on this outfall. An average daily force of 187 men was employed throughout the month. The work was 86.6 per cent complete at the end of the month.

Des Plaines River Intercepting Sewer.

Nash Brothers, contractors, began operations on the 19th and continued throughout the month, the work consisting of installation of plant and other work preparatory to starting construction. An average daily force of 6.7 men was employed from the 19th to the end of the month.

Pumping Stations.

Calumet Sewage Pumping Station.

The work of installation of the plant was carried on intermittently during the month, dragline being moved from Section 7 of the Calumet sewer to this work on the 29th. An average daily force of 25 men was employed on the last three days of the month.

Maintenance and Operation.

Main Channel.

Walls.

The Sanitary District organization employed a force of 16 men operating the "cement gun" on the work of plastering the east wall of the Main Channel just south of Romeo. A total of 23,000 sq. ft. was plastered with a mix of one part cement to three parts sand during the month.

Bridges.

Minor repairs were made to the floors of the bridges at Willow Springs, Lemont, Romeo and Ninth streets.

Controlling Works.

The bear trap dam at the Controlling Works was open some part of twenty days of a total of one hundred and fifty-seven hours and forty-five minutes, an average of five hours and fifty-six minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 30 men on cutting out disintegrated concrete and replacing the same with portland cement concrete, throughout the month. About 600 cu. yds. of concrete was placed in the east wall between 16th street, Lockport and the power house during the month.

BRIDGES.

9th and 16th Street Bridges.

Two men were on duty on these bridges, working shifts of 8 hours each from 7 A. M. to 3 P. M., and from 3 P. M. to 11 P. M. Each man caring for both bridges.

Butterfly Dam.

This dam was not operated during the month.

Dams at the Power House.

In order to maintain the flow of water required by law the forty-eight foot dam at the power house was open some part of each day of the month or a total of four hundred and nine hours and forty minutes, an average of thirteen hours and thirteen minutes for each day of the month. The twelve foot dam at the power house some part of sixteen days or a total of sixty-five hours and forty minutes, an average of two hours and seven minutes for each day of the month.

Samples of canal water were taken every 8 hours for the Sanitary Division. The water gage was repaired on the 24th. Three men were on duty, working shifts of 8 hours each, throughout the month.

I. and M. Canal Lock at the Power House.

During the month nine boats passed through the lock. No one was on duty on this lock except when the boats were passed through, this being done by the dam tender. The lock house circuit was repaired on the 13th.

Electrical Department.

The bulkhead which was built for the Electrical Department for use in repairing the head gates at the power house was made tight and the work of repairing the head gates of unit No. 4 was begun.

DES PLAINES RIVER DIVERSION.

Channel.

The Sanitary District organization employed a force of 20 men in cutting trees and underbrush and cleaning out the bed of the Des Plaines River south of the Lyons-Summit Road.

Bridges.

Minor repairs were made to the floor of the 16th street bridge over the Des Plaines River by the Bridge Division.

NORTH SHORE CHANNEL.

Outfalls and Ditches.

The Sanitary District Organization employed a force of 10 men from July 1st to 22nd constructing a new outfall on the west side of the channel just south of Lincoln avenue, and from the 23rd to 30th, cleaning out the ditches on the west side of the channel at Peterson avenue.

Bridges.

The Sanitary District organization made minor repairs at the Peterson avenue and Bryn Mawr avenue bridges.

PUMPING STATIONS.

39th Street Pumping Station.

The Great Lakes Dredge and Dock Company, contractors for repairing the

breakwater at this station, continued operations throughout the month as weather permitted. The work done consisted of driving piles, placing caps on wales and excavating for and placing back logs and anchor rods. This station was operated pumping sewage throughout the month. Repairs on sewage pump No. 2 were practically completed by the end of the month. The steam turbine and generator were not operated during the month. The boom on the coal hoisting derrick, which broke on May 29th, was repaired and put back into service on the 19th. Sewer pump No. 1 was operated some part of six days or a total of eighteen hours and five minutes. Pump No. 3 some part of one day or a total of four hours. Pump No. 4 some part of thirty-one days or a total of seven hundred and forty-one hours and thirty minutes. The three pumps were operated for a grand average of eight hours and twelve minutes for each day of the month and pumped an average of 10,438 cubic feet of sewage for each minute of the month. The sewage pump No. 2 and fresh water pumps Nos. 5 and 6 were shut down the entire month.

Lawrence Avenue Pumping Station.

The Great Lakes Dredge and Dock Company, contractors for repairing the intake crib at this station, employed two pile drivers in driving two seven-pile clumps at the west and northwest side of the crib on the 22nd. This completes all work on this contract.

This station was operated pumping sewage throughout the month, as follows: Sewer pump No. 2 was operated some part of twenty-five days or a total of five hundred and thirty-six hours and ten minutes. Pump No. 3 some part of thirteen days or a total of two hundred and thirteen hours and fifty-five minutes. The two pumps were operated for a grand average of twelve hours and fifty-eight minutes for each day of the month, and pumped an average of 6,417 cubic feet of sewage for each minute of the month. The sewer pump No. 1 and fresh water pump No. 4 were shut down the entire month. Sewage pumping engine No. 2 was out of service from the 8th to the 13th on account of a bent connecting rod.

Wilmette Pumping Station.

This station was operated pumping fresh water throughout the month. The pumps operated as follows: Pump No. 1 was operated some part of twenty-seven days or a total of six hundred and thirteen hours and forty-two minutes. Pump No. 2 some part of thirty-one days or a total of seven hundred and seventeen hours and seven minutes. Pump No. 3 some part of twenty-eight days or a total of six hundred and eleven hours and twenty-seven minutes. Pump No. 4 some part of thirty days or a total of six hundred and forty-three hours and seventeen minutes. All of the four pumps were operated for a grand average of twenty hours and fifty-one minutes for each day of the month and pumped an average of 44,606 cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY IMPROVEMENTS.

SEWAGE AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation superintended by the Sanitary Division.

Laboratory at 39th Street.

Chemical analysis were made weekly of samples collected from the Main Channel at Lockport, and the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on the samples from Lockport. Analyses were made of routine samples from the Stock Yards testing station covering raw sewage, and activated sludge process effluents.

Stock Yards Testing Station.

This station was operated as usual with the following devices: Activated sludge process, aeration and settling tanks.

Sewer and Rain Gauges.

A sewer gauge was operated at Davis street, in Evanston. Rain gauges were operated at 39th street pumping station, Stock Yards testing station, Lockport, Kensington and 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from the Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe. A special trip of investigation was made up the North Branch of the Chicago River and down the Main Channel, with final analyses.

ENGINEERING.

Drafting Division.

During the month the following work was carried on: Compiling the Calumet Sewer atlas; indexing and filing maps, plans and field books. Writing the Chief Engineer's annual report for 1917 was begun and continued through the month. Work on the new Calumet Sag atlas was continued. Computations were made of the cost of steam shovel operations on Section 9 of the Calumet-Sag Channel. Revising section corner notes. Writing monthly reports of the Calumet-Sag construction work was continued. Real estate maps were revised. Main Channel gauges were inspected. Preparing plat of easement for the Des Plaines intercepting sewer. Preparing contract drawings and specifications for the removal of the union loop power house. Claims for extra pumping on Section 9 of the Calumet-Sag Channel were investigated. Inspecting work at Blue Island.

Bridge Division.

A tracing was made showing plat, profile and cross section of Western avenue at the end of the Western avenue bridge on the Calumet-Sag Channel for the use in making improvements to the pavements and sidewalks, as authorized by the Board. An effort was made to dispose of the old bridge across Stony Creek, on the C., R. I. & P. (Main Line) which is to be removed to clear the site for the bridge across the Calumet-Sag Channel. Bids were received and rejected as being too low. Work was continued on the plans for the steel work and for the reinforcing metal on the floors and walls of the Calumet pumping station. Shop details for miscellaneous structural steel work were made. A list of Sanitary District bridges outside of the City of Chicago, showing their cost and date of completion, was made.

Hydraulic Measurement Division.

The self-registering gages in the Main Channel at Willow Springs and Lemont and in Lake Michigan at the coast guard station at Chicago were operated and periodically inspected. Records from these gages were worked up in the office.

Sanitary Division.

The preparation of plans and specifications for the Calumet intercepting sewer and the Evanston sewage pumping station were continued. Conferences were held with officials of the City of Chicago and with Mr. W. D. Richardson and others from Packingtown on various topics related to the sewage problems in Packingtown. The preparation of plans and specifications of the Des Plaines intercepting sewer was completed. The preparation of plans for the Des Plaines River treatment works was continued. Conferences were held with village officials. Two test pits were dug on the site of the treatment works. The preparation of supplementary plans for the Calumet

sewage pumping station was continued. Correspondence was carried on with Constructing Engineer Wood on all pumping stations. Preparation was made of evidence in the lawsuits brought by the Pilsen Coal Company on account of contracts at the 39th street and Lawrence avenue Pumping Stations. In company with Messrs. George W. Fuller, Fales, and Majors Doten, Head and Messer of the U. S. Army, an inspection was made of the sanitary conditions along the north shore, visiting Evanston filter plant, Wilmette pumping station, Fort Sheridan and Great Lakes. A visit was made to the testing station of Milwaukee Sewerage Commission at Milwaukee, Wis.

Field Parties.

Party was employed on North Shore Channel sloping notes and field notes. Chicago River Dredging and docking. Repairs to breakwater at 39th street and intake crib at Lawrence pumping stations. Measuring spoil banks in Section 8 M. C. Investigation of sewage in the north branch of the Chicago River. Survey of Lot 13 on Main Channel. On Chicago and Illinois Western R. R. claim for damages caused by wash from spoil banks.

The Calumet-Sag field parties performed the usual routine construction duties as follows: The Sag Division on Sections 1 and 5. The Worth Division on Sections 7 and 8. The Blue Island Division on Sections 13 and 14.

The engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, figuring unit costs of the Evanston and Calumet sewers and Calumet-Sag Channel sections. Keeping the accounts of the department, furnishing information to other departments and performing other necessary duties, etc.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

The Clerk presented the report of the Chief Engineer for the month of August, 1918, which was ordered published and filed, as follows:

CHICAGO, September 1, 1918.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of August, 1918, giving the detailed operations of the same.

CONSTRUCTION.

CHICAGO RIVER, MAIN OUTLET, SOUTH BRANCH, INCLUDING ITS FORKS.

Union Loop Power House Dock.

The Brennan Construction Company, employed by the Northwestern Elevated Railway Company, on the construction of a new dock on the cut-off line in front of the Union Loop Power House property, continued operations throughout the month. The work done consisted of concreting the new wall of the power house east of the cut-off line.

NORTH SNORE CHANNEL.

Removal of Spoil Banks.

The National Brick Company removed 12,701 cubic yards of material from the east bank of the channel between Brown and W. Railroad avenues during the month.

Contract for Sloping.

No work was done during the month on this contract by Byrne Brothers' Dredging & Engineering Company, contractors.

BRIDGES.

Lincoln Street.

The Sanitary District organization force completed the work of underpinning the east abutment of this bridge on the 13th. The work consisted of constructing two concrete cylinders resting on hard material at an elevation of —50.4 C. C. D. and anchoring the abut-

ment to a concrete block placed about 80 feet east of the east end of the bridge.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, contractor for the construction of this section, continued operations throughout the month. Excavating glacial drift in connection and turning basin by dragline between stations 969+50 and 972+00 (M. C.) from the 1st to the 31st, working in one and two 10-hour shifts per day. Drilling rock in channel between stations 3+75 and 4+00 from the 1st to the 6th, in turning basin at station 968+00 (M. C.) from the 21st to 31st, along the Main Channel wall from the 1st to the 24th, working one 10-hour shift per day. Backfilling behind walls was carried on by locomotive crane, using material obtained from cleaning up channel, between stations 11+00 and 22+00 from the 1st to the 31st, working one 10-hour shift per day. Moving gravel out of channel was carried on by derrick and clam shell on the south berm, at station 20+50 from the 1st to the 3rd, working one 10-hour shift per day. Blasting rock in channel was done on the 10th at station 4+00, working one 10-hour shift. Pumping channel was carried on at stations 28+00, working two 12-hour shifts per day throughout the month. Traveler was dismantled on the 12th and 13th. The following miscellaneous work was carried on: Backfilling by hand at stations 53+00 on the 1st; building fence at Archer Road bridge on the 1st, painting same on the 12th; cleaning bottom of channel from the 1st to 31st; grading road for hauling coal to turning basin from the 18th to 20th. The following force account work was carried on: Pumping channel for Sections 2 to 12, inclusive, was carried on at Section 1 by James O. Heyworth, under supplementary agreements, throughout the month; excavating for snubbing posts from the 2nd to the 5th, moving gravel to snubbing post holes on the 9th. An average daily force of 68.5 men was employed. At the end of the month 88.4 per cent of the total estimated value of the contract was completed.

Section 5.

James O. Heyworth, the contractor for Section 1, continued driving sheet piling south of the feeder, between McLaughry Road and 82nd street, to stop the underground seepage into the channel, from the 1st to the 13th, working under supplemental agreements.

Sections 7 and 8, Riprap Contract.

Green & Sons Company, contractors for this work, employed an average daily force of 13.4 men and carried on the following work: Laying riprap slope, loading and breaking up rock and cleaning up. Dragline No. 4 was engaged in excavating slide on the north slope between stations 513+25 and 514+25 on the 2nd; backfilling between same stations on the 3rd; excavating glacial drift from outfall on west side of Piper Road on the 17th. Six teams were engaged in hauling rock and coal and cleaning up berm from the 1st to the 6th. All work was carried on in one 10-hour shift per day. All work under this contract was completed on the 19th.

Section 13.

A. Guthrie & Company, Inc., contractors for the construction of this section, continued operations throughout the month. The following work was carried on: Concreting the north and south retaining walls was carried on between stations 772+09 and 777+26 from the 1st to the 8th, 12th to 16th, working one 10-hour shift per day. Pumping channel was carried on at station 761+50 from the 1st to the 15th and 20th to 31st, working one 10-hour shift per day; at station 782+00 from the 1st to the 16th, working one 4-hour shift per day. The sewer along Canal

street broke at the Stony Creek Diversion and the work of repairing this break was carried on, on the 3rd, 5th, 6th, 10th and 12th. An average daily force of 22.3 men was employed. At the end of the month 56.6 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Company, Inc., contractors for the construction of this section, continued operations throughout the month. The following work was carried on: Excavating glacial drift was done by steam shovel No. 5 in channel east of south curved wall between stations 848+00 and 846+00 from the 1st to the 14th, also excavating spoil from spoil banks to be used for backfilling behind north wall from the 29th to 31st, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 from the 1st to the 31st, and at station 837+00 on the 1st, 8th to 24th, working an average of 7 hours per day. An average daily force of 14 men was engaged in placing concrete in the Morgan Park sewer on the 15th and 16th, for the junction with the Calumet sewer on the 19th, 26th and 27th; for the transformer house on the 28th. The following hand work was carried on: Backfilling behind the south curved wall from the 1st to the 14th and behind the north wall between stations 833+00 and 834+00 from the 29th to the 31st. An average daily force of 13 men was engaged in laying a tile drain at station 796+00, from the Frentz and Fisher properties to the channel on the 15th, 16th, 19th to 21st, working one 10-hour shift per day. An average daily force of 54.8 men was employed. At the end of the month 99.2 per cent of the total estimated value of the contract was completed.

BRIDGES.

Western Avenue Bridge.

A. Guthrie & Co., contractors, employed an average daily force of 10 men on the work of preparing to lay temporary pavement at the south approach to this bridge on the 30th and 31st, working one 10-hour shift per day.

Division Street Bridge.

A. Guthrie & Co., contractors, employed an average daily force of 6 men, placing reinforcements in the north and south abutments of this bridge from the 14th to the 28th, working one 10-hour shift per day.

B. & O. and G. T. W. Ry. Bridge.

A. Guthrie & Co., contractors, employed 2 teams grading for G. T. W. track diversion on the 1st. Pumping channel at station 749+00 throughout the month, working one 5-hour shift per day. Handwork was done as follows: Excavating and placing stringers for temporary west bound track (I. H. B. Ry.) from the 1st to the 3rd; grading tracks of the B. & O. (McCook Line) diversion from the 5th to the 12th; concreting grillage on new B. & O. C. T. bridge over channel on the 23rd, working one 10-hour shift per day on all handwork.

The B. & O. Ry. Co. employed an average daily force of 9 men, installing new interlocking system on the B. & O. (McCook Line) diversion, from the 8th to the 30th, working one 10-hour shift per day.

The Strobel Steel Construction Co. employed an average daily force of 8 men on the following work: Placing bridge shoes for new bridge on the 5th and 6th, placing girders on same from the 14th to 16th, placing floor sections from the 17th to the 21st; unloading steel from the G. T. W. Ry. bridge on the 30th, working one 10-hour shift per day on this work. Handwork was carried on as follows: On the new B. & O. C. T. bridge; building trestle from the south abutment to the south bank from the 1st to 3rd; placing bridge shoes on the 5th and 6th; painting girders from the 7th to 13th; placing girders, floor sections and riveting same

from the 14th to the 29th. Unloading steel for the G. T. W. bridge on the 30th. This work was carried on in one 10-hour shift per day.

C., R. I. & P. Ry. Bridge.

The C., R. I. & P. Ry. employed an average daily force of 16 men rearranging track circuit (signals from the 1st to the 8th; unloading material for new track over Bridge No 1 on the 14th and 15th; laying track on Bridge No. 1 (west bound track) from the 16th to 21st. Work was carried on in one 10-hour shift per day.

Controlling Works.

The G. P. Nichols Co., electrical contractors, employed an average daily force of 3 men setting machinery on northwest sector gate from the 28th to the 30th, working an 8-hour shift per day.

The Kelly-Atkinson Construction Co., contractors, employed an average daily force of 22 men placing fenders, skin plates, uprights and riveting on the northeast sector gates from the 1st to the 26th, on the southeast sector gates from the 1st to the 27th and in painting steel for southwest sector gate from the 5th to the 8th, northwest gates from the 7th to the 10th, other steel on the 16th, 17th, 26th to 29th. All this work was carried on in one 10-hour shift per day.

Sewers.

CALUMET INTERCEPTING SEWER.

Contract Section No. 4.

Nash Brothers, contractors, continued operations consisting of excavation of the top cut by steam shovel and the bottom cut by dragline and placing of the concrete section until the 23rd, at which date the steam shovel reached the west side of the I. C. R. R. at station 182+84 and continued excavating under the said tracks. The balance of the work on the sewer was continued throughout the month, progressing from station 168+91 to 176+23. An average daily force of 85 men and 25 teams was employed throughout the month. The work was 83.7 per cent completed at the end of the month.

Contract Section No. 6.

Byrne Brothers' Dredging & Engineering Company, contractors, continued regular operations throughout the month. The work consisted of excavation of top cut by steam shovel and bottom cut by dragline and the placing of concrete sewer section: The work progressing from station 68+78 to station 75+45. Grading and leveling Indiana avenue south of 120th place and other miscellaneous grading was carried on throughout the month. An average daily force of 110 men was employed throughout the month. The work was 80.9 per cent completed at the end of the month.

Contract Section No. 7.

T. J. Forschner Contracting Company, contractor, continued operations throughout the month. The work of placing riprap at the creek crossing east of Wentworth avenue was carried on from the 7th to the 14th. The work of replacing fences along the line of the sewer and repairing and cleaning up was carried on intermittently throughout the month. An average daily force of 15.5 men and 0.5 teams was employed. The work reported complete in July.

EVANSTON INTERCEPTING SEWER.

Contract Section No. 1.

Nash-Dowdle Company, contractors, continued operations throughout the month. The work of dismantling the compressed air plant and cleaning up on the 7-foot sewer in Orrington avenue was completed on the 27th.

On the 5-foot sewer on the Lake Front excavation by Parson's trenching machine and the placing of the concrete section was continued throughout the month, the work progressing from station 16+63 to station 28+51. The work between Lee and Main streets was be-

gun on the 1st and completed on the 31st (stations 31+85 and 37+70), a Moore trenching machine being employed on this work.

The work of installing a pile driver for the placing of protection to the sewer on the Lake Front near Dempster street was completed on the 16th and the driving of piles was started on the 17th and continued throughout the month.

The work on the 3½-foot sewer on the Lake Front consisted of excavation of the top cut by steam shovel and the bottom cut by hand was continued throughout the month, progressing from station 66+34 to station 74+28.

Construction of the 6-foot sewer in Elmwood avenue by the tunnel method was continued throughout the month; the work being completed at the end of the month from station 19+72 to 32+33.

On the 4½-foot sewer in Custer avenue the shaft and air locks were installed complete on the 15th and the regular tunnelling operations continued throughout the month. The work being completed at the end of the month from station 45+46 to station 52+31.

Work on the 6-foot sewer in Lake street by the tunnel method was carried on to the 6th, from station 99+14 to station 98+93, when the tunnel work was abandoned owing to the instability of the ground. An average daily force of 257 men was employed throughout the month. The work was 95 per cent completed at the end of the month.

DES PLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, Contractors, continued operations of installing plant, laying water pipe, etc., throughout the month. The work of sinking shafts for tunnel work was commenced on First avenue north of West 12th street on the 10th and continued throughout the month. An average daily force of 11.5 men was employed throughout the month.

PUMPING STATIONS.

The T. J. Forschner Contracting Company, contractors, continued operations throughout the month. Stripping of the black soil was started on the 1st and completed on the 26th; this work being done by the dragline.

The excavation for the substructure of the building was started on the 27th and continued throughout the month, spoil being used for backfill on section 7 of the Calumet sewer east of Michigan avenue. The work of dismantling the second dragline preparatory to shipment was begun on the 16th and continued throughout the month. The general work of the installation of the plant including the construction of standard gage switch track and storage tracks and erection of material bins, etc., was carried on throughout the month. An average daily force of 26 men was employed throughout the month.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Walls.

The Sanitary District organization employed a force of 16 men operating the "cement gun" on the work of plastering the east wall of this channel south of Romeo throughout the month. About 31,500 square feet of wall was covered with a mixture of one part cement to three parts sand.

BRIDGES.

The Sanitary District organization made minor repairs to the bridges at Summit, Lemont and Romeo during the month.

CONTROLLING WORKS.

The bear trap dam at the controlling works was open some part of ten days or a total of fifty-three hours and fifty minutes, an average of one hour and forty-four minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 33 men on the work of cutting out disintegrating concrete in the walls of this channel just south of 16th street, Lockport, and replacing same with Portland cement mortar. About 360 cubic yards of concrete were replaced during the month.

BRIDGES.

9th and 16th Street Bridges.

The transformer at the 9th street bridge was fused on the 17th and at the 16th street bridge on the 17th and 30th. Two men were on duty on these bridges, working from 7:00 A. M. to 3:00 P. M. and 3:00 P. M. to 11:00 P. M. throughout the month.. Minor repairs were made to the floor of the 9th street bridge.

BUTTERFLY DAM.

This dam was operated on the 11th, 18th and 25th. The heater was repaired on the 21st.

DAMS AT THE POWER HOUSE.

These dams were operated during the month as follows: The forty-eight foot dam at the power house was open some part of each day of the month or a total of three hundred and sixty-seven hours and forty-five minutes, an average of eleven hours and forty-eight minutes for each day of the month. The twelve foot dam at the power house was shut down the entire month. Three men were on duty, working shifts of 8 hours each, throughout the month. Samples of canal water were taken every 8 hours for the Sanitary Divisions.

I. & M. Canal Lock at the Power House.

Three boats passed through the lock during the month. No one was on duty, except when the boats were passed through and this was done by the dam tender. The lock house circuit was repaired on the 7th, 8th, 9th and 12th, The motor was repaired on the 21st.

Power House (Electrical Dept.)

The work of repairing the head gates at the Power House was continued throughout the month.

Desplaines River Diversion.

The Sanitary District Organization employed a force of 22 men cutting trees and underbrush and cleaning out the bed of the Desplaines River south of the Lyons-Summit Road throughout the month.

NORTH SHORE CHANNEL.

Outfalls.

The Sanitary District organization employed a force of 11 men and one team from the 1st to the 6th and 26th to the 31st constructing a new outfall on the west side of the channel north of Touhy avenue and the same force was engaged in repairing the outfalls at Pratt avenue from the 7th to the 11th and filling in a gully east of the channel north of Main street from the 12th to the 25th.

BRIDGES.

Main Street Bridge.

The east abutment of this bridge was underpinned by constructing a concrete footing under the north end of the abutment where the earth had been washed from under the abutment by the water from an outfall. The work was begun on the 14th and completed on the 19th.

Peterson Avenue Bridge.

This bridge was barricaded on the 20th preparatory to reflooring with creosoted block. The work of removing the old floor was completed on the 30th and cleaning of the steel work was begun.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated pumping sewage throughout the month, the pumps working as follows: Sewer pump No. 1 was operated some part of eighteen days or a total of two hundred and thirty hours and ten minutes. Pump No. 2 some part of nineteen days or a

total of two hundred and seventy-five hours. Pump No. 4 some part of sixteen days or a total of three hundred and twenty-one hours. The three pumps were operated for a grand average of eight hours and fifty-three minutes for each day of the month and pumped an average of 10076 cubic feet of sewage for each minute of the month. Sewer pump No. 3 and fresh water pumps Nos. 5 and were shut down the entire month.

Repairs on sewage pump No. 2 were completed and the pumps were put back in service on the 2nd. The steam turbine and generator were not operated during the month.

No work was done during the month by the Great Lakes Dredge & Dock Company, contractors for the repairing of the breakwaters at this station.

Lawrence Avenue Pumping Station.

This station was operated in pumping sewage throughout the month, the pumps were operated as follows: Sewer pump No. 2 was operated some part of eleven days or a total of one hundred and seventy-one hours and fifteen minutes. Pump No. 3 some part of twenty-seven days or a total of five hundred and seventy-six hours and thirty-five minutes. The two pumps were operated for a grand average of twelve hours and four minutes for each day of the month and pumped an average of 5564 cubic feet of sewage for each minute of the month. Sewer pump No. 1 was shut down the entire month. Fresh water pump No. 4 was operated some part of eight days or a total of eighty-seven hours and fifteen minutes, an average of two hours and forty-nine minutes for each day of the month, and pumped an average of 2290 cubic feet of water for each minute of the month.

The parapets around the walls leading to the intake and discharge chambers of the fresh water pump were raised.

Wilmette Pumping Station.

This station was operated pumping fresh water throughout the month, the pumps were operated as follows: Pump No. 1 was operated some part of twenty-four days or a total of five hundred and fifteen hours and fifty-eight minutes. Pump No. 2 some part of twenty-one days or a total of four hundred and thirteen hours and three minutes. Pump No. 3 some part of twenty-three days or a total of four hundred and eighty-three hours and four minutes. Pump No. 4 some part of fifteen days or a total of two hundred and forty-eight hours and forty-nine minutes. All of the five pumps were operated for a grand average of thirteen hours and twenty-four minutes for each day of the month and pumped an average of 28389 cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY IMPROVEMENTS AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation superintended by the Sanitary Division.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and from the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on samples from Lockport.

Analyses were made of routine samples from the Stock Yards testing station covering raw sewage and activated sludge process effluents.

Stock Yards Testing Station.

This station was operated as usual with the following devices: activated sludge process, aeration and settling tanks.

Sewer and Rain Gages.

A sewer gage was operated on Davis street in Evanston. Rain gages were operated at the 39th street pumping sta-

tion, Stock Yards testing station, Lockport, Kensington and 31st and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from the Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru, and Chillicothe. Special samples were collected along the Main Channel and the Illinois River on a trip from Chicago to the Mississippi River.

ENGINEERING.

Drafting Division.

The work carried on during the month consisted of the following: Revising large real estate wall maps, indexing and filing maps and plans was continued, plotting cross sections of Main Channel spoil banks, writing the Chief Engineer's Annual Report for 1917 was continued, work on the Calumet-Sag atlas was continued, writing monthly reports of the Calumet-Sag Channel was continued, preparing contract drawings for the widening of the Chicago River at 16th street, copying section corner notes for permanent record, computing labor costs for pumping section 9 of the Calumet-Sag Channel, titles were printed on the plans of the Evanston Sewage Pumping Station, preparing notes on the Chicago River, copying records for the Calumet-Sag atlas at the County Building.

Bridge Division.

Work was continued on the shop details for the steel work of the Calumet Sewage Pumping Station and on the design and details of the reinforced concrete floors and walls.

Sanitary Division.

The preparation of a report on the testing station work was begun. The preparation of plans and specifications for the Calumet Intercepting Sewer was continued. Conferences were held with officials of the City of Chicago.

Conferences were held with Mr. W. D. Richardson and others from Packingtown on various topics relating to the sewage problems in Packingtown. Preparation of plans and specifications for the Evanston Sewage Pumping Station was completed and the work advertised. Preparation of plans of the Desplaines River treatment works was continued and conferences were held with the village officials. The preparation of supplementary plans for the Calumet Sewage Pumping Station was continued and correspondence was carried on with Consulting Engineer, A. B. Wood, on all pumping stations. Studies were made of the re-arrangement of the 95th Street Pumping Station.

A report was made on the condition of water supply and sewage disposal in Indiana. In company with Dr. Bundesen of the Chicago Health Department, an inspection was made of the plants of the American Steel Foundries Company at Indiana Harbor and inquiry made into the health conditions in East Chicago.

Mr. T. C. Hatton, Chief Engineer of the Milwaukee Sewage Commission, visited the testing station and the Calumet Intercepting Sewer construction work. Other visitors included the City Council of Kioto, Japan.

A report was made on the corn-products works of the Chicago Refining Company at Harvey, Ill.

Attention was given to the suit of H. J. McNichols Company for claims on the sewer contract completed by them in 52nd avenue and W. 39th stret.

Hydraulic Measurements Division.

The self-registering gages on the Main Channel at Willow Springs and Lemont and on Lake Michigan at the U. S. Coast Guard Station, Chicago Harbor, were operated and periodically inspected. The records from these gages were worked up in the Main Office.

Field Parties.

Party was employed on North Shore sloping, North Shore Channel outfalls repairs, Chicago River docking, repairs to cribs at the 39th Street Pumping Station, claims for damages by the C. & I. W. R. R. caused by wash from spoil banks, spoil bank measurements at Romeo for stone to be taken by the A. T. & S. F. R. R. Co.; land and dock rental survey, Lot 13 Section "O" Main Channel; setting gage at Lawrence avenue Pumping Station; right of way survey Section 7 Main Channel.

The Calumet-Sag field parties performed the usual routine construction as follows: The Sag Division on Section 1; the Worth Division on Sections 7 and 8; the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimate notes, computing unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections, keeping the accounts of the department, and performing other necessary duties, etc.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

The Clerk presented the report of the Chief Engineer for the month of September, 1918, which was ordered published and filed, as follows:

CHICAGO, October 1, 1918.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of September, 1918, giving the detailed operations of the same.

CONSTRUCTION.

Chicago River, Main Outlet, South Branch and Its Forks.

The Brennan Construction Company, employed by the Northwestern Elevated Railroad Company for the construction of a new dock on the cutoff line in front of the union loop power house property, below Van Buren street, continued operations throughout the month. The work done consisted in constructing a new wall for the power house, east of the cutoff line.

NORTH SHORE CHANNEL.

Removal of Spoil Banks.

The National Brick Company removed no material from the spoil banks of the channel during the month.

CALUMET-SAG CHANNEL.

Section 1.

J. O. Heyworth, contractor for the construction of this section continued operations throughout the month. The following work was carried on: Excavating glacial drift by dragline between stations 968+00 and 973+50 (M. C. Stations) from the 1st to 30th, working one 10-hour shift per day. Drilling rock in turning basin between stations 968+50 and 973+50 from the 1st to 30th, 10,368 lineal feet of holes were drilled. Backfilling behind north wall was carried on by steam shovel No. 4 between stations 3+50 and 15+50 from the 10th to 30th and by locomotive crane No. 1, using material cleaned up from channel, between stations 4+00 and 4+50 from the 1st to 16th, and by locomotive crane No. 2 between stations 43+50 and 67+00 from the 14th to 30th. Blasting rock in turning basin at station 973+00 on the 29th. All the aforementioned work was carried on in one 10-hour shift per day. Pumping channel was carried on at station 28+00, working two 12-hour shifts per day throughout the month. The following work was carried on by force account: Installing snubbing posts on the 10th, and from the 16th to the 25th. Pumping channel for sections 2 to 12 was done throughout the month on this section by the contractor under supplementary agreements. An average daily force of

80.5 men was employed. At the end of the month 90.5 per cent of the total estimated value of the contract was completed.

Section 13.

A. Guthrie & Co., contractors for the construction of this section, continued operations throughout the month. Pumping channel was carried on at station 761+50 from the 1st to 5th, and at station 782+00 on the 4th and 5th, working one 10-hour shift per day, and at station 782+00 on the 26th and 27th, working one 6-hour shift per day. An average daily force of 4 men was employed. At the end of the month 57.2 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Co., contractors for the construction of this section, continued operations throughout the month. The work was carried on as follows: Excavating spoil from spoil bank for backfilling behind the north wall, by steam shovel No. 5, between stations 824+00 and 835+25 from the 5th to 14th and 18th to 28th, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 from the 3rd to 7th, working one 5-hour shift per day, and on the 19th and 20th working one 6-hour shift per day, and at station 837+00 from the 3rd to 15th working an average of 7½ hours per day, and from the 19th to 21st working one 7-hour shift per day. Backfilling north wall by hand was carried on between stations 834+00 and 844+00 from the 3rd to 28th, working one 10-hour shift per day. An average daily force of 5 men was employed in removing forms from the sewage discharge chamber from the 3rd to 5th and 13th and 14th, working one 10-hour shift per day. Backfilling Morgan Park sewer was carried on by an average daily force of four men from the 6th to 9th, working one 10-hour shift per day.

BRIDGES.

Western Avenue Bridge.

A. Guthrie & Co. employed an average daily force of ten men in laying temporary pavement at the south approach of this bridge from the 1st to 3rd and 5th to 7th, and at the north approach from the 24th to 30th, working one 10-hour shift per day.

Chicago Street Bridge.

A. Guthrie & Co. employed an average daily force of seven men building a temporary road bridge across the channel from the 26th to 30th.

Division Street Bridge.

A. Guthrie & Co. employed an average daily force of 11.5 men placing reinforcing metal in the south abutment from the 3rd to 6th and 13th and 14th, 20th and 21st; concreting north abutment from the 16th to 19th, and south abutment from the 23rd to 25th, removing forms from the abutments on the 26th and 27th. All the above work was carried on in one 10-hour shift per day, except concreting from the 16th to 19th, which was done in one 7½-hour shift per day.

B. & O. and G. T. W. Ry. Bridges.

A. Guthrie & Co. contractors, carried on the following work during the month: Excavating rock and glacial drift from the 13th and 27th between stations 749+00 and 747+25, working one 10-hour shift per day; drilling 10-ft. holes in rock from the 28th to 30th, working one 10-hour shift per day. Pumping channel was carried on at station 749+00 from the 1st to 3rd, working one 5-hour shift per day and on the 13th and 14th, working one 9-hour shift per day. Hand work was carried on as follows: Grading the north end of the new B. & O. (C. C. Division) bridge from the 6th to 10th; laying rails over said bridge on the 11th and 12th, working one 10-hour shift per day. The B & O. Ry. Company employed an ave

age daily force of 12.6 men installing new interlocking system on the new B. & O. (McCook Line) from the 3rd to 6th, 8th to 15th, 17th to 30th; laying tracks and decking over bridge B. & O. (C. C. Division) on the 7th; diverting tracks over new B. & O. (C. C. Division) bridge on the 16th. Traffic was diverted over new bridge at 9:52 A. M. on the 16th.

The Strobel Steel Construction Company employed an average daily force of nine men in riveting girder braces and placing stringers on the new B. & O. (C. C. Division) bridge from the 3rd to 6th and in unloading steel for the G. T. W. Ry. bridge on the 7th, working one 10-hour shift per day.

Chicago, Rock Island and Pacific Ry. (Main Line) Bridge.

The C. R. I. & P. Co. employed an average daily force of 21.9 men on the following work: Grading for and making connection to new west-bound track crossing new bridge No. 1, from the 3rd to 5th. The first train passed over the new bridge at 11:30 A. M. on the 5th. Ballasting new west-bound track on the 6th and 7th; grading and making connection to new east bound track crossing new bridge No. 1 on the 9th. The first train passed over diverted new east-bound track at 12:09 on the 9th. Making connection from new diverted east-bound track to A. Guthrie & Co.'s spur track on the 10th. Ballasting new east-bound track on the 10th; stripping felt and burlap from 10-inch water main on the C. R. I. & P. bridge over Stony Creek on the 10th; placing braces under same from the 13th to 17th; recovering same with frost proofing on the 18th and 19th. All work was carried in one 10-hour shift per day.

The Overland Construction Company employed an average daily force of seven men in cutting rivets to move girders on former east-bound track of bridge crossing Stoney Creek from the 17th and 19th; taking out said girders on the 20th; unloading same to Gregory street on the 22nd, working one 10-hour shift per day.

Controlling Works.

A. Guthrie & Co. employed an average daily force of 13 men in building forms and concreting lamp post bases on the south wall from the 25th to 28th, working one 10-hour shift per day.

G. P. Nichols, electrical contractor, employed an average daily force of three men setting machinery for sector gates from the 3rd to 30th, working one 10-hour shift per day.

The Kelly-Atkinson Construction Co. employed an average daily force of nine men setting racks on the northeast sector gates on the 3rd and 6th; placing screens from the 18th to 21st; setting up railings from the 22nd to 26th. Placing screens on the southeast sector gates on the 5th and 6th; painting steel on the 17th; placing fenders on the northwest gate on the 7th; placing ice cutters on the 13th and 14th; drilling holes in struts to drain water pockets from the 18th to 24th; also on the southwest gate from the 7th to 14th; placing screens on the 16th and 17th; painting steel on the 20th; placing ice cutters on the 27th. All work was carried in one 10-hour shift per day.

The Imperial Brass Co. employed one man in burning ice cutters on the southwest, northeast and southeast sector gates on the 17th and 18th, working one 8-hour shift per day.

The Sanitary District organization employed two men in moving brick and material to construct machinery houses at the sector gates on the 30th, working eight hours.

SEWERS.

CALUMET INTERSECTING SEWER.

Contract Section No. 4.

Nash Brothers, contractors, continued work of placing concrete sewer section throughout the month. The work progressing from station 176+23 to station

181+76. The work of excavating under the I. C. R. R. tracks was carried on by steam shovel throughout the month. An average daily force of 63.5 men and 17 teams was employed. The work was 89.4 per cent completed at the end of the month.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Company continued operations throughout the month. The work consisting of excavation of the top cut by steam shove land the bottom cut by dragline and placing concrete sewer section; progressed from station 75+44 to station 80+66. An average daily force of 105 men was employed. The work was 87.1 per cent completed at the end of the month.

Contract Section No. 7.

The T. J. Forschner Contracting Company, contractors, continued operation of cleaning sewer and grading throughout the month. The main items of this contract were reported completed in July. An average daily force of 3.5 men and one team was employed throughout the month.

Evanston Intercepting Sewer.

Nash-Dowdle Company, contractors, continued operations throughout the month. On the 5-foot sewer on the lake front, work was continued until the 9th, excavation being handled by the Parson's excavator. The work progressed from station 28+51 to station 31+85. Backfilling by steam shovel on this sewer was completed on the 28th, this completing all work on the said sewer.

The work of driving the pile protections for the sewer on the lake front near Dempster street was completed on the 5th and the pile driver was moved along the lake front to Lee street from the 5th to 13th, driving of piles for protection of the sewer at this point was continued throughout the month. The work on the 3½-foot sewer on the lake front was continued throughout the month. The work consisting of excavation of the top cut by steam shovel and the bottom cut by hand and placing concrete sewer section. The work progressed from station 74+28 to station 89+09. The work on the 6-foot sewer in Elmwood avenue, in tunnel, was continued throughout the month. The work progressing from station 19+72 to station 15+88 and from station 32+33 to station 34+65. At this point the sewer changes from 6-foot to 4½-foot. The work on the 4½-foot sewer was continued throughout the month, progressing from station 34+65 to station 36+32. Work on the 4½-foot sewer in Custer avenue and Washington street, in tunnel was continued throughout the month, work progressing from station 46+46 to station 42+49 and station 52+31 to station 55+71.

The work of installing machinery for the 4-foot sewer in Custer avenue was begun on the 4th, excavation was begun on the 6th, concreting begun on the 14th and continued throughout the month, progressing from station 58+75 to station 62+10. The excavation plant consisted of Parson's excavator for the top cut and a Moore excavator for the balance of the cut. The work of constructing the 6-foot sewer in Lake street by open cut method was begun on the 4th. Concreting was begun on the 17th and continued throughout the month, work progressing from station 95+39 to station 96+78. An average daily force of 237 men was employed throughout the month. The work was 99.2 per cent completed at the end of the month.

PUMPING STATIONS.

Calumet Sewage Pumping Station.

The T. J. Forschner Contracting Company continued operations throughout the month. The excavation for the sub-structure was continued from the 1st to 25th. During the balance of the month the drag line was engaged in

rehandling of the spoil. The spoil from the excavation was placed for backfill on section 7, of the Calumet sewer until the 7th, and from the 7th to 25th the spoil was used for grading the roadway at the north end of the property. The second dragline was received on the 18th and the work of assembling same was carried on for the balance of the month. The work of erecting material bins, cement sheds and general plant and the installation of two concrete mixers was carried out throughout the month. An average daily force of 39 men was employed throughout the month.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Walls.

The Sanitary District organization employed a force of 20 men operating the "cement gun" throughout the month, plastering about 13,000 sq. ft. of the west wall, south of Romeo, with a mixture of one part cement to three parts sand.

Bridges.

The Sanitary District organization made minor repairs to the bridges at Summit during the month.

Controlling Works.

The bear trap dam at the controlling works was open some part of four days or a total of nine hours and forty-five minutes, an average of nineteen minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 35 men on the work of repairs to the walls of this channel throughout the month. The work consisted of cutting out distintegrating concrete and replacing same with portland cement concrete. Some 290 cu. yds. was replaced on the east wall just south of 16th street, Lockport.

BRIDGES.

Ninth and Sixteenth Street Bridges.

A transformer was repaired and installed on the 9th street bridge on the 5th and 6th. Two men were on duty on these bridges working shifts from 7 A. M. to 3 P. M. and from 3 P. M. to 11 P. M. throughout the month, each man caring for both bridges.

Butterfly Dam.

This dam was operated on the 1st, 8th, 15th and 22nd, to ascertain the condition of the same.

Dams at the Power House.

The forty-eight foot dam at the power house was open some part of twenty-five days or a total of one hundred and seventy-three hours and twenty-five minutes, an average of five hours and forty-seven minutes for each day of the month. The twelve foot dam at the power house was shut down the entire month.

New window shades were placed on the dam house on the 14th. Samples of the canal water were taken every eight hours for the Sanitary Division Three men were on duty, working three 8-hour shifts per day, throughout the month.

I. & M. Canal Lock at the Power House.

Nineteen boats passed through this lock during the month. No one was on duty except when the boats were locked through when this was done by the dam tender. The lights and switches were repaired and new gages were installed on the 19th. The switches were repaired on the 28th.

Power House (Electrical Department).

The Sanitary District organization continued work on the repairs to the head gates at the power house during the month.

Des Plaines River Diversion.

The Sanitary District organization employed a force of 22 men, working

from the 1st to 15th, cutting underbrush and cleaning out the bed of the Des Plaines River south of the Lyons-Summit Road.

Bridges.

Minor repairs were made to the 16th street bridge during the month by the Sanitary District organization.

North Shore Channel.

The Sanitary District organization employed a force of 11 men and one team from September 1st to 15th constructing a new outfall on the west side of the channel north of Touhy avenue. The same force worked from the 16th and 18th reinforcing the outfall west of the channel south of Touhy avenue, and from the 18th to 30th cleaning out the ditches west of the channel at Peterson avenue. Another force of 22 men worked from the 16th to 30th filling a gully east of the channel about 500 feet south of Oakton avenue.

BRIDGES.

Peterson Avenue Bridge.

Lumber for the re-flooring of this bridge arrived on the 2nd. During the month the steel work of the bridge was cleaned and painted. The back walls at the ends of the bridge were built up to the level of the roadway and the new floor was placed. The bridge was opened to traffic on the 27th. All work was done by the Sanitary District organization, except laying the paving blocks, which was done by the James A. Sackley Company. Minor repairs were made to the roadway floors of the bridges at Touhy, Devon and Howard avenues.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated pumping sewage throughout the month. The pumps were operated as follows: Sewer pump No. 1 was operated some part of three days or a total of fourteen hours and forty minutes. Pump No. 2 some parts of three days or a total of eleven hours and forty-five minutes. Pump No. 4 some part of thirty days or a total of seven hundred and twenty hours. The three pumps were operated for a grand average of 8 hours and eighteen minutes for each day of the month and pumped an average of 6520 cubic feet of sewage for each minute of the month. Sewer pump No. 3 and the fresh water pumps Nos. 5 and 6 were shut down the entire month. The steam turbine and generator were not operated and sewage pumping engine No. 3 was dismantled for a thorough overhauling during the first part of the month and not back in service at the end of the month. The construction of a housing for the coal crane was begun on the 9th and continued throughout the month by a force of two carpenters. The Great Lakes Dredge and Dock Company, contractors for repairing the breakwater and dredging the intakes at this station, begun dredging on the 19th and removed 2140 cubic yards from the intake proper and 1434 cubic yards from the intake entrance.

Lawrence Avenue Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows: Sewage pump No. 1 was operated some part of one day or a total of forty-five minutes. Pump No. 2 some part of seventeen days or a total of two hundred and ninety-three hours and fifteen minutes. Pump No. 3 some part of twenty-three days or a total of four hundred and forty-three hours and three minutes. All of the three pumps were operated for a grand average of eight hours and eleven minutes for each day of the month and pumped an average of 4234 cubic feet of sewage for each minute of the month. Fresh water pump was operated some part of seventeen days or a total of two hundred and fifty-seven hours and 30 minutes, an average of eight hours and thirty-two minutes for each day of the month, and pumped an average of 6848

cubic feet of water for each minute of the month. Minor repairs were made to pumping engine No. 1, to the boiled feed pump and to the coal conveyor during the first half of the month.

Wilmette Pumping Station.

This station was operated pumping fresh water throughout the month. The pumps were operated as follows: Pump No. 1 was operated some part of twenty-seven days or a total of five hundred and thirty-two hours and thirty-eight minutes. Pump No. 2 some part of nineteen days or a total of three hundred and three hours and forty-five minutes. Pump No. 3 some part of fourteen days or a total of two hundred and thirty hours and eight minutes. Pump No. 4 some part of eighteen days or a total of two hundred and seventy hours and fifteen minuts. All of the four pumps were operated for a grand average of seven hours and eight minutes for each day of the month and pumped an average of 24021 cubic feet of water for each minute of the month. A diver was employed in removing obstructions from the screens at this station from the 9th to 21st, and was assisted by a part of the bridge repair force.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATION.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on the samples sent from Lockport. Analyses were made of routine samples from the Stock Yards testing station covering raw sewage and activated sludge process effluents. Special analyses were made on samples from the Main Channel and Illinois River, collected on a trip from Chicago to the Mississippi River.

Stock Yards Testing Station.

This plant was operated as usual with the following devices: Activated sludge process, aeration and settling tanks. The entire plant was shut down for dismantling on the 30th.

Sewer and Rain Gages.

Rain gages were operated at the 39th street pumping station, Stock Yards testing station, Lockport, Kensington, and at 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Drafting Division.

Work of revising the real estate wall map was continued and completed. Compiling the Calumet-Sag atlas was continued. Preparing Chicago River notes was continued. Writing the Chief Engineer's annual report for 1917 was completed. Copying section corner notes was continued. Indexing and filing maps and plans was continued. Writing monthly reports of the Calumet-Sag Channel construction work was continued. Data at the warehouse was indexed. Preparing maps and plans for general use. Computing steel estimate for Union Loop power house. Investigation of claims for extra pumping on Section 9 of the Calumet-Sag Channel. Work on the Calumet sewer atlas was continued. Main Channel lease map was posted.

Bridge Division.

The details of the steel work of the

Calumet sewage pumping station were completed. Work was continued on the design and details of the reinforced concrete work. A plan was made for the re-flooring of the Peterson avenue bridge. A design was begun for a temporary dam at the 48th avenue bridge across the Calumet-Sag Channel to permit pumping out the channel between this point and the controlling works, after Section 1 has been cut through to the Main Channel. A permit was secured from the Council of Defense for building the machinery houses at the controlling works of the Calumet-Sag Channel.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Des Plaines River treatment works was continued and conferences held with the village officials. The preparation of supplementary plans for the Calumet pumping station was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed re-arrangement of the 95th street pumping station. A visit was made to the north shore water and sewage plants.

Hydraulic Measurement Division.

The self-recording gages at the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records from the gages were worked up in the office.

Field Parties.

Party was engaged on North Shore Channel sloping, field work and outfall repairs at Lincoln avenue. Chicago River dredging and docking. Repairs to the cribs at 39th street Pumping Station. Spoil bank measurements on Section O, Main Channel, and also on Section 13, Main Channel for stone taken for the A. T. & S. F. Ry. Co.

The Calumet-Sag field parties performed the usual routine construction duties as follows: The Sag Division on Section 1; the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections. Keeping the accounts of the department, preparing vouchers, furnishing information for other departments, and performing other necessary duties, etc.

Respectfully submitted,

G. M. Wisner,
Chief Engineer.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

Chicago, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Electrical Development reports that the Board on August 1, 1918 (page 869 of the Proceedings) entered into a contract with the L. Wolff Manufacturing Company, located at Hoyne and Carroll avenues, Chicago, to supply said company 1,000 k. w. of electrical energy to be largely used in connection with Government work for a period of two years from October 1, 1918, and after said period until said contract is cancelled by either party by giving 30 days written notice.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he

states that the Sanitary District expended the sum of $1,007.74 exclusive of the cost of transformers, for electrical equipment and labor required on the premises of said company in furnishing said service, and also the sum of about $2,000.00 exclusive of cost of cable and transformers in reinforcing the distributing circuits of the Sanitary District and substation equipment at he Rice and Lincoln sreets substation. He further states that the Government has cancelled its war contracts with said company, and said company now requires only 500 k. w. of electrical energy for its regular work, and has requested that said contract be cancelled, and offers to pay the Sanitary District the sum of $2,000.00 towards the expense above stated, if the Sanitary District will enter into a new contract with it to furnish 500 k. w. of electrical energy for a period of twenty-one months from January 1, 1919, and after said period until said contract is cancelled by either party by giving 30 days written notice.

Your Committee having considered said matter, is of the opinion that the offer of said company above set forth should be accepted, and said new contract which is herewith transmitted to the Board, be approved, and therefore recommends the passage of the following order:

Ordered, That the contract between The Sanitary District of Chicago and the L. Wolff Mfg. Co., dated July 25, 1918, for furnishing 1,000 k. w. of electrical energy to said company be, and the same is hereby cancelled upon the payment to the Sanitary District by said company the sum of $2,000.00; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk, be, and they are hereby authorized and directed to execute in duplicate the attached new contract for furnishing to said company 500 k. w. of electrical energy upon the terms and conditions therein set forth, which said contract has heretofore been duly executed by said company.

Respectfully submitted,
H. E. Littler,
Chairman.
Matt. A. Mueller,
Wm. J. Healy,
George W. Paullin,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

Chicago, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Electrical Development presents herewith in duplicate renewals of contracts with the Chicago Steel Foundry Company, 3720 South Kedzie avenue, and the Clapp, Norstrom and Riley Equipment Company, 28th street and 61st avenue, Clyde, Cook County, Illinois, both corporations, wherein said companies agree to take, and the Sanitary District agrees ot furnish electric power for the periods of time and upon the terms and conditions set forth in said contracts, which are in the usual form and have been approved by the Electrical Engineer. Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby au-

thorized and directed to execute, in duplicate, the attached contracts, the same having been heretofore properly executed by said companies.

Respectfully submitted,
H. E. Littler,
Chairman.
Matt. A. Mueller,
Wm. J. Healy,
George W. Paullin,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Judiciary.

Mr. Healy presented the following report from the Committee on Judiciary:

Chicago, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Judiciary reports that on October 16, 1915, Anna Kartak brought suit against hte Sanitary District in the Circuit Court of Cook County, General No. B17,153, to recover damages in the sum of $5,000.00 for injuries alleged to be due to an electric shock claimed to have been sustained by her on September 14, 1914, by reason of the falling of an electric transmission wire of the Sanitary District on West 25th street at the alley between Whipple street and Albany avenue in Chicago, Illinois.

Your Committee further reports that the Attorney has given it as his opinion that while there is some doubt about the liability of the Sanitary District as to the cause and result of said accident, it is advisable to accept her offer to settle said suit for the sum of $350.00.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $350.00 payable to Anna Kartak and deliver the same to her upon a voucher to be approved by the Attorney upon her furnishing a release in full, of all claims, and demands for damages against the Sanitary District because of said accident, and upon her furnishing such other releases as the Attorney may deem necessary, and also upon the receipt of a stipulation signed by her and her Attorney of Record to dismiss said suit without costs to the Sanitary District.

Respectfully submitted,
Wm. J. Healy,
Chairman.
H. E. Littler,
George W. Paullin,
Patrick J. Carr,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Eight.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Finance transmits herewith the bond of C. Arch Williams, as Attorney of The Sanitary District of Chicago, in the sum of $20,000.00, with the Globe In-

demnity Company thereon, as surety, conditioned upon the faithful performance of his duties as such Attorney.

Your Committee, having examined said bond, recommends the passage of the following order:

Ordered, That the bond of C. Arch Williams, as Attorney of the Sanitary District above specified be, and the same is, hereby approved.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it may be necessary to print and bind 500 copies of the biennial report of the receipts and disbursements of The Sanitary District of Chicago for the years 1916 and 1917, copies of which report are to be transmitted to the Governor and both houses of the General Assembly of the State of Illinois, as required by law.

Your Committee therefore recommends the pasage of the following order:

Ordered, That the Clerk of the Sanitary District be, and he is hereby, authorized and directed to prepare specifications for the printing and binding of said report, and to advertise for bids in accordance therewith.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of January payroll, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 7.70
Hutchins Lumber & Storage Company (lumber)	392.74
Curtis Door & Sash Company (window sashes, etc.)	280.00
Henry W. Lee, C. E. (easements for land)	70.83
Thornton-Claney Lumber Company (lumber)	95.10
Amount carried forward	$ 846.37

Amount brought forward	$ 846.37	
Henry M. Joda (gutters, etc.)	202.00	
Art Metal Construction Company (elevator equipment)	202.00	
Nagel Bros. (lime, cement, sand)	134.00	
John F. Klein (teaming)	69.00	
Goodyear Rubber Company (hip boots)	40.00	
McCallum & Clark (rent)	25.00	
Central Sales Agency (bricks)	24.00	
Orrin Eames (rent)	20.00	
Mary Pechnich (second hand lumber)	19.20	
Robert W. Hunt & Co. (inspection of machinery)	13.74	
H. M. Hooker Glass & Paint Company (linseed oil, etc.)	13.02	
C. Vilkas (rent)	12.00	
Chas. E. Arnold Company (batteries, etc.)	7.50	
Chas. E. Arnold Company (supplies)	6.45	
Peth & Goeler (repairing 3 tapes)	1.15	
Peth & Goeler (repairing tape)	.35	
Nelson Bros. Laundry Company (towel service)	1.00	
		$ 1,636.78

Maintenance and Operation Account.

John McGillen, Clerk (payroll for cutting trees and hauling coal)	$ 944.50	
John McGillen, Clerk (payroll, repairs to Main Channel)	416.65	
John McGillen, Clerk (payroll, repairs to bridges)	302.80	
John McGillen, Clerk (payroll, construction of machine houses)	225.05	
John McGillen, Clerk (payroll, construction of machine houses)	28.80	
John McGillen, Clerk (freight charges)	1,075.48	
John McGillen, Clerk (freight charges)	581.49	
John McGillen, Clerk (freight charges)	127.17	
The Midland Creosoting Company (lumber)	11,589.70	
Thornton-Claney Lumber Company (lumber)	2,591.57	
Jas. A. Sackley Company (labor and material)	436.80	
Allis-Chalmers Mfg. Company (thrust plates)	393.25	
Nicholas & Bookwalter (overhauling coal conveyor)	351.47	
Jos. Sandeen (teaming)	254.72	
Bentley, Murray & Co. (printing)	210.00	
Wm. O'Connell (supplies)	166.35	
David G. Murray (teaming)	125.87	
Nicholas & Bookwalter (labor and material)	121.98	
Sullivan Oil Company (oil)	115.99	
Geo. L. Hammons, Inc. (ply belt, etc.)	101.69	
Wilbur J. Connell (supplies)	69.95	
Otley Paint Mfg. Company (paint)	62.40	
H. M. Johns-Manville Company (cement)	58.80	
Argo Summit Lumber Company (lumber)	53.40	
Thomas F. Ryan Company (lumber)	55.82	
Edinger & Co. (cement, sand and gravel)	49.25	
Buchanan-Daley Company (yellow pine)	46.08	
The Texas Company (supplies)	42.11	
Contracting & Material Company (tarpaulin)	42.00	
Barrett Hardware Company (supplies)	41.28	
H. M. Hooker Glass & Paint Company (Mexoline)	31.25	
L. Gould & Co. (brooms, mops, etc.)	30.28	
G. Johnson (teaming)	30.00	
Buchanan-Daley Company (yellow pine lumber)	28.25	
American Steam Conveyor Corporation (pipe)	27.55	
Stebbins Hardware Company (machine bolts, etc.)	26.31	
Gibbons Bros. (gasoline, etc.)	25.50	
Amounts carried forward	$ 20,881.56	$ 1,636.78

Amounts brought forward	$ 20,881.56	$ 1,636.78
American Steam Conveyor Corporation (hand hole covers)	25.20	
Henry M. Joda (iron smoke pipe)	21.00	
Detroit Graphite Company (paint)	20.50	
Mike Riess (teaming and materials)	17.50	
Worthington Pump & Machinery Corporation (repairing pump)	16.98	
Heath & Milligan Mfg. Company (oil, etc.)	16.95	
Chicago Feather Duster Company (brooms, etc.)	14.40	
The Barrett Company (liquid creosote oil)	14.00	
Chicago Steel Foundry Company (wheel)	12.96	
Butler St. Foundry & Iron Company (castings)	12.75	
The Carl Anderson Company (repairing chain tackle)	12.50	
The Fred J. Ringley Company (printing)	12.50	
Wm. O'Connell (nails, bolts, etc.)	11.10	
Builders Iron Foundry (venturi charts)	10.51	
M. H. Detrick Company (castings)	10.80	
Weil Bros. (repair parts)	10.10	
Fuller-Morrison Company (supplies)	9.77	
Miller Hardware Company (supplies)	9.65	
Stewart Ice Company (ice)	9.50	
Miller Hardware Company (supplies)	9.38	
Stebbins Hardware Company (drills, etc.)	9.19	
Geo. L. Hammons, Inc. (repairing electric drill)	9.00	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
G. Johnson (teaming)	8.00	
Geo. L. Hammons, Inc. (pump valves)	7.15	
Barrett Hardware Company (supplies)	6.84	
Standard Oil Company (Perfection oil)	6.60	
Aldine Press (printing)	6.50	
Sanborn Company (charts for gauge)	6.00	
Standard Oil Company (kerosene)	6.00	
Wilbur J. Connell (ladder)	6.00	
Mears-Slayton Lumber Company (yellow pine)	5.76	
Henry Stuckart (nails)	5.75	
Kirby Motor Trucking Company (charges)	5.53	
The Dalton Adding Machine Company (adding machine paper)	5.50	
Burr-Vack Company (diaries)	4.90	
National Lead Company (solder)	4.40	
W. A. Jones Foundry Company (cast iron pulley)	4.00	
Manning Bros. Garage (supplies)	3.80	
F. A. Koth (tools)	3.60	
Distributors Coal Company (1,000 lbs. coal)	3.50	
Stebbins Hardware Company (Yale padlock, etc.)	3.15	
Peerless Express (cartage charges)	3.00	
Sweet, Wallach & Co. (folio paper)	2.85	
Geo. L. Hammons, Inc. (millboard)	2.33	
Bissell Laundry (laundry service)	1.42	
Burr-Vack Company (mucilage)	1.25	
Weil Bros. (black cap)	1.16	
Miller Hardware Company (1 mop and padlock)	1.05	
Stebbins Hardware Company (1 chisel)	1.05	
Underwood Typewriter Company (repair parts)	1.00	
Parker's Towel Supply Company (towel service)	1.00	
Kueffel & Esser Company (scale)	.75	
Weil Bros. (repair parts)	.66	
The University of Illinois (indexing records)	.50	
The Peoples Gas Light & Coke Company (gas service)	.45	
		21,323.75
Amount carried forward		$ 22,960.53

Amount brought forward		$ 22,960.53
Illinois & Michigan Canal and Illinois River Conditions Department.		
E. H. Heilbron (oil)	$ 6.25	
B. F. Goodrich Rubber Company (casings)	51.40	
H. & E. F. Hunter (coal)	35.43	
Chillicothe Hardware Company (supplies)	20.19	
Hotel Atlantic (room and restaurant fees)	20.00	
Hotel Atlantic (room and restaurant fees)	13.55	
Public Service Company of Northern Illinois (electric energy)	12.27	
Newton Thompson (chimney jack)	5.75	
Peoples Telephone Company (service)	5.20	
		170.04
Law Department.		
John McGillen, Clerk (expenses of employe)		22.40
Treasury Department.		
Stevens, Maloney & Co. (cash boxes)		14.50
Clerical Department.		
Albert Hancock & Co. (pencils)	$ 72.00	
Robert S. Leete & Co. (bond covers)	62.50	
Burr-Vack Company (indelible pencils, etc.)	19.50	
Geo. G. Renneker Company (payment blanks)	17.50	
		171.50
Police Department.		
J. J. McGraw (hay, oats and coal)	$ 29.92	
Watt Electric Company (battery)	28.00	
Lawrence Kirk (oats, hay and straw)	14.65	
N. Kettmann (horse shoes)	3.00	
Chicago Telephone Company (service)	2.00	
		77.57
General Account.		
Fred Klein Company (printing Proceedings)	$ 405.00	
Fred Klein Company (printing Proceedings)	20.50	
Parker's Towel Supply Company (service)	52.00	
Hinckley & Schmitt, Inc. (drinking water)	51.00	
Geo. G. Renneker Company (printing)	42.50	
Geo. G. Renneker Company (printing)	42.50	
Geo. G. Renneker Company (printing)	37.50	
Chicago Telephone Company (service)	15.92	
20th Century Press Clipping Bureau (clippings)	8.00	
Jas. D. Ahern Company (lettering windows)	6.00	
David G. Murray (auto hire)	5.00	
Addressograph Company (addresses)	2.56	
Wells, Fargo & Co. (express charges)	1.64	
		690.12
Electrical Department.		
John McGillen, Clerk (expenses of employes)	$ 436.42	
John McGillen, Clerk (weekly payroll)	176.40	
John McGillen, Clerk (postage stamps)	100.15	
John McGillen, Clerk (water taxes)	9.38	
Commonwealth Edison Company (demand indicators)	437.67	
Commonwealth Edison Company (rewinding transformer)	191.75	
Commonwealth Edison Company (lorecated elbows, etc.)	141.30	
Western Electric Company (demand indicators)	487.20	
Western Electric Company (switch, etc.)	183.50	
General Electric Company (oil vessels, etc.)	442.99	
Amounts carried forward	$ 2,606.78	$ 47,067.19

Amounts brought forward	$ 2,606.78	$ 47,067.19
General Electric Company (inspecting turbine)	6.35	
Belden Mfg. Company (wire)	282.32	
Belden Mfg. Company (wire)	87.49	
Overland Motor Company (repairing and repair parts)	281.65	
Overland Motor Company (robes, etc.)	48.25	
Overland Motor Company (repair parts)	18.19	
The Ohio Brass Company (insulators)	275.33	
The Ohio Brass Company (cover discount deducted)	5.09	
Humphrey & Sons Company (runners)	260.75	
Chicago Insulated Wire & Mfg. Company (wire)	253.77	
Chicago Telephone Company (service)	201.24	
Chicago Telephone Company (service)	43.78	
Chicago Telephone Company (service)	6.10	
Advance Forging & Tool Works (special hooks)	175.00	
Conroy Boiler & Tank Works (eye bolts)	169.15	
Conroy Boiler & Tank Works (machine bolts)	149.25	
National Lead Company (wiping solder)	165.06	
Union Petroleum Company (gasoline)	161.00	
City of Blue Island (leased line charges)	158.51	
Bentley, Murray & Co. (printing)	145.00	
Sinclair Refining Company (gasoline)	142.60	
Wm. Heggie (gate hinges and repairing Ford)	94.10	
American Supply Company (white waste)	92.45	
Naugle Pole & Tie Company (cedar poles)	84.15	
American Supply Company (cheese cloth)	82.96	
Jas. B. Clow & Sons (Eddy fire hydrant, etc.)	62.75	
Barrett Hardware Company (steel pulley, etc.)	54.81	
Westinghouse Electric Mfg. Company (transformers)	53.53	
Western Slate Company (slate)	45.00	
The Fred J. Ringley Company (printing)	39.18	
Burr-Vack Company (books, etc.)	41.70	
Woodward Governor Company (bushings)	37.55	
John Bigane & Sons (coal)	37.50	
Vesta Accumulator Company (bulbs for lights)	36.69	
Garden City Springs Works (plates)	34.65	
The Rayfield Agency (Rayfield carburetor)	30.85	
G. Johnson (teaming)	30.50	
Wilbur J. Connell (kettles, etc.)	29.17	
F. E. Marsh Shoe Company (boots)	28.13	
A. Sharp (repairing wagon)	28.00	
The Lombard Governor Company (crank boxes)	25.37	
David G. Murray (teaming)	24.80	
Olof Jackson & Son (coal)	24.50	
A C. Miller (gasoline)	24.15	
Stebbins Hardware Company (steel road rakes, etc.)	23.55	
R. Hanisch Sons Company (grease cups, etc.)	22.33	
Nelson & Le Moon (fenders, etc.)	21.55	
Consumers Company (ice)	21.44	
Henry Stuckart (hinge hasps, etc.)	19.68	
Modern Auto Repair Shop (piston ring)	19.00	
Garden City Spring Works (springs, etc.)	19.00	
Geo. B. Carpenter & Co. (bolts, etc.)	18.50	
American Blue Print Paper Company (blue prints)	18.77	
Standard Oil Company (gasoline)	18.40	
Holman Soap Company (soap powder)	17.81	
The Texas Company (gasoline and kerosene)	15.65	
Fischer & Hayes Rope Company (manila rope)	18.34	
Joliet Transfer Company (charges for use of truck)	13.50	
Parker's Towel Supply Company (charges for towel service)	13.25	
Amounts carried forward	$ 6,965.92	$ 47,067.19

Amounts brought forward	$ 6,965.92	$ 47,067.19
A. C. Miller (gasoline)	12.65	
Weil Bros. (valve, etc.)	10.76	
Robt. S. Leete & Co. (bond paper)	10.29	
A. Kutscha & Co. (rims)	9.12	
H. M. Hooker Glass & Paint Company (wood alcohol)	7.50	
Burr-Vack Company (paper)	6.54	
Auto Radiator Mfg. Company (repairing radiator)	6.50	
Chas. Novak & Son (windshield)	5.50	
The Gardner Governor Company (piston rings)	5.50	
Manning Bros. Garage (primer plugs)	5.00	
Inland Electric Company (unilets)	4.86	
Fuller-Morrisson Company (bandages)	4.80	
Crane Company (unions, etc.)	4.61	
United States Crushed Stone Company (telephone charges)	4.55	
American Railway Express (express charges)	4.03	
Exide Battery Depots, Inc. (thermometers)	2.99	
Auto Cape Top Company (new lights, etc.)	2.58	
City Collector, City of Chicago (inspection charges)	2.52	
Linde Air Products Company (oxygen)	2.20	
Exide Battery Depots, Inc. (hydrometer)	2.31	
Joliet Motor Company (wire, etc.)	2.15	
A. Sharp (hooks)	2.00	
Delta Star Electric Company (cover discount deducted)	1.88	
G. A. Carlson (overcharges on electric light bill)	1.30	
Joliet Welding & Repair Shop (welding casting)	1.25	
The Dalton Adding Machine Company (adding machine ribbon)	1.00	
		7,090.31

Miscellaneous Accounts.

John McGillen, Clerk (Stock Yards Testing Station payroll)—			
Construction Account	$ 109.60		
Maintenance and Operation	9.60		
		$	119.20
John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation	$ 2.75		
Clerical Department	18.80		
Electrical Department	9.35		
			30.90
Chicago Telephone Company (service)—			
Construction Account	$ 78.92		
Maintenance and Operation	62.63		
Electrical Department	.20		
			141.75
American Blue Print Paper Company (blue prints)—			
Construction Account	$ 82.39		
Maintenance and Operation	4.70		
Real Estate Department	.15		
Law Department	21.26		
			108.50
Henry Stuckart (material and supplies)—			
Construction Account	$ 58.20		
Maintenance and Operation	35.49		
			93.69
Star Taxi Service & Garage (taxi service)—			
Construction Account	$ 8.00		
Maintenance and Operation	44.00		
			52.00
Amounts carried forward		$ 546.04	$ 54,157.50

Amounts brought forward		$ 546.04	$ 54,157.50
A. Hannibal (repairing chairs)—			
Clerical Department	$ 2.50		
General Account	18.00		
		20.50	
Parker's Towel Supply Company (service)—			
Construction Account	$ 2.50		
Maintenance and Operation	17.80		
		20.30	
Underwood Typewriter Company (adjusting typewriters)—			
Clerical Department	$ .75		
General Account	.75		
		1.50	
			588.34
Grand Total			$ 54,745.84

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEO. W. PAULLIN.
Committee on Finance.

Mr. Lawley moved that the report be adopted and the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Eight.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, January 9, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that during the first part of October, 1918, he was authorized by your Committee to construct certain fences around the Lockport Power House in order to protect the approaches to said Power House during the war; that said matter was of an emergency character, and that, acting upon said authority, he constructed said fences at a cost of $772.37, and he now requests that his action in the premises be ratified and confirmed.

Your Committee, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the action of the Chief Engineer in expending the sum of $772.37, as above specified, be, and the same is hereby ratified and confirmed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark,

Healy, Lawley, Mueller, Nance and Paullin—Eight.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, January 9, 1919.

To The Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Employment herewith transmits the following report of actions taken:

DROPPED FROM SERVICE.

Police Department—

Joseph Ring, Patrolman, $115.00 mo.

A. J. Stasch, Patrolman, $115.00 mo.

Engineering Department—

Wm. Grace, Carpenter Helper, 50c per hour.

P. Carlin, Carpenter Helper, 50 per hour.

P. Lannon, Carpenter Helper, 50c per hour.

John Barzen, Carpenter Helper, 50c per hour.

M. Ryan, Carpenter Helper, 50c per hour.

Ernest Johnston, Laborer, 45c per hour.

John C. Morrison, Watchman, 40c per hour.

I. H. McMurphy, Watchman, 40c per hour.

TRANSFERS.

Engineering Department—

Edw. Weichinger, Laborer, 45c per hour; Carl Orlich, Laborer, 45c per hour. Transferred from the payroll of the Repairs to the Walls of the Main Channel of the payroll of the Testing Division.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
H. E. LITTLER,
Committee on Employment.

Mr. Paullin moved that the report be approved, published and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Passed and not voting—Mr. Sergel—One.

PETITIONS AND COMMUNICATIONS.

The Clerk presented the following resolution from the City of Blue Island:

Be it Resolved by the City Council of the City of Blue Island that the order of the Sanitary District dated November 27, 1918, is hereby concurred in, and the contract and lease existing between the City of Blue Island and said Sanitary District, dated December 20, 1908, and expiring December 20, 1918, be, and the same is, hereby extended until such time as a new contract and new lease is entered into between said City of Blue Island and said Sanitary District, or until some other arrangement is made by said City of Blue Island to secure electric power.

EDWARD N. STEIN,
Mayor.

Corporate Seal.
City of Blue Island,
Cook County, Ill.

GEO. J. LANDGRAF.

Approved by the City Council of Blue Island, Illinois, the 16th day of December, 1918.

Referred to the Committee on Electrical Development.

The Clerk presented a communication from the Nash-Dowdle Company, stating that said company was about to request the final inspection and estimate on its contract for the Evanston Intercepting Sewer, Conract No. 1, and extending invitation to the Board of Trustees to inspect said sewer.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Clark presented the following resolution:

WHEREAS, The Board on January 3, 1918, authorized Trustee Wallace G. Clark to appoint a committee to confer with the officials of the United States and other parties in interest, with reference to the withdrawal of the ultimate maximum quantiy of 12,000 cubic feet of water per second from Lake Michigan, and

WHEREAS, Trustee Clark, on January 31, 1918 (page 117 of the Proceedings), reported that in accordance with such authority he appointed as such Committee Trustees Clark, Paullin, Dailey and Carr and Mr. Adcock, the then attorney of the Board, and

WHEREAS, Trustee James M. Dailey is no longer a member of said Board, and

WHEREAS, Trustee Clark now reports that he has appointed William J. Healy as a member of such Committee in place of Mr. Dailey; therefore, be it

Resolved, That the appointment by Trustee Clark of the Committee as above named and the substitution of Mr. William J. Healy as a member of said Committee in place of Mr. Dailey be, and the same is, hereby ratified and confirmed.

Mr. Clark moved that the resolution be adopted.

The motion prevailed.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, JANUARY 16, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the special meeting of December 31, 1918, be approved, as printed, without being read.

Mr. Nance moved, as a substitute, that the minutes of the special meeting of December 31, 1918, as printed in the proceedings, be amended by adding on page 1605, left hand column, thirtieth line, after the words, "I object to it," the following:

"I believe that if this item is passed today, it is passed with undue haste, and I am opposed to it at this time, but I want an opportunity to investigate it, to look into it; that is all I am asking."

On roll call the substitute motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley moved that the minutes of the Proceedings of the special meeting of December 31, 1918, as amended, be approved.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 16, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Electrical Engineer in which he states that one of the large transformers at the Terminal Station recently burned out and that some of the coils and other equipment must be replaced.

He further states that the General Electric Company was the manufacturer of said transformers and it is advisable to order said coils and other equipment from said Company at an estimated cost of $750.00

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered. That the Electrical Engineer be, and he is, hereby authorized and directed to purchase from the General Electric Company said coils and other equipment, provided the cost of same will not exceed the sum of $750.00.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 16, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Electrical Engineer in which he states that the Nelson & LeMoon auto truck of the Sanitary District was considerably damaged on January 9, 1919, by colliding with a street railway car as it was coming out of the driveway at the Terminal Station, and as said auto truck is now out of service it is necessary to repair the same.

He further states that Nelson & LeMoon have offered to furnish a new motor for said truck for the sum of $400.00, and agreed to allow the sum of $25.00 for the scrap value of the damaged motor, making a net price for said new motor of $375.00, and to furnish the necessary material and labor to install said new motor and make other necessary repairs for the additional sum of $163.00.

Your Committee, having considered the matter, is of the opinion that said auto truck should be repaired, and recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is, hereby authorized and directed to purchase from Nelson & LeMoon a new motor for said auto truck for the sum of $400.00 less the sum of $25.00 allowed for the scrap value of said damaged motor, and to

deliver said damaged motor to said Company, and to accept the offer of said Company to make the repairs above specified for the additional sum of $163.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 16, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of January payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll First Half of January, 1919.

John McGillen, Clerk (general payroll)		$ 26,813.76

Construction Account.

John McGillen, Clerk (construction of machine houses, Controlling Works, Calumet-Sag Channel)	$ 28.00	
T. J. Forschner Contracting Company (work on Calumet Sewage Pumping Station)	21,484.74	
James O. Heyworth (Section 1, Calumet-Sag Channel)	10,920.00	
A. Guthrie & Co., Inc. (work on Section 12, Calumet-Sag Channel)	3,203.30	
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	984.37	
A. Guthrie & Co., Inc. (extra work on Section 13, Calumet-Sag Channel)	832.84	
A. Guthrie & Co., Inc. (extra work on Section 14, Calumet-Sag Channel)	265.03	
A. Guthrie & Co., Inc. (extra work on Section 13, Calumet-Sag Channel)	3.58	
A. Guthrie & Co., Inc. (extra work on Section 13, Calumet-Sag Channel)	56.80	
Auto Trimming & Painting Company (building winter top on car)	637.50	
John McGillen, Clerk (expenses of employes)	78.81	
Nash-Dowdle Company (work on Contract No. 1, Evanston intercepting sewer)	17,839.32	
John McGillen, Clerk (expenses of employes)	104.50	
John McGillen, Clerk (expenses of employes)	91.93	
John McGillen, Clerk (expenses of employes)	34.89	
The Lord & Bushnell Company (lumber)	88.71	
Brunner & Lay (maple rollers)	34.00	
Schreiber Bros. (nails, etc.)	18.57	
United States Rubber Company (hip boots)	11.50	
Goodyear Rubber Company (No-Tear boots)	6.50	
		85,524.89
Amount carried forward		$112,338.65

Amount brought forward		$112,338.65
Maintenance and Operation Account.		
John McGillen, Clerk (payroll 39th St. Pumping Station)	$ 293.84	
John McGillen, Clerk (special roll, repairs to North Shore Channel bridges)	9.50	
John McGillen, Clerk (freight charges paid I. C. R. R. on fuel for 39th St. Pumping Station)	316.75	
John McGillen, Clerk (freight charges paid C. & A. R. R. on fuel for Lawrence Ave. Pumping Station)	75.80	
John McGillen, Clerk (freight charges paid C. & E. I. R. R. on fuel for Lawrence Ave. Pumping Station)	67.89	
Stebbins Hardware Company (carriage bolts, etc.)	227.73	
Lynch-Clarisey Company (grease)	170.45	
Geo. Irmiter (teaming)	123.50	
Wilcoxson Coal & Coke Company (coal)	101.48	
M. H. Detrick Company (arch tile)	68.40	
A. Leschen & Sons Rope Company (wire rope)	51.44	
F. W. Lucke & Co. (paving blocks)	28.87	
North Shore Hardware Company (supplies)	27.35	
Miller Hardware Company (brushes, dusters and oil)	17.50	
Burr-Vack Company (index sheets and covers)	16.50	
Barrett Hardware Company (supplies)	15.82	
Eugene Dietzgen Company (tracing paper)	10.36	
Hinckley & Schmitt (drinking water)	8.50	
Hinckley & Schmitt (drinking water)	8.50	
Stebbins Hardware Company (supplies)	7.20	
John Bigane & Sons (coal)	6.55	
The Lunkenheimer Company (lubricator)	4.34	
Keuffel & Esser Company (slide rule)	4.00	
Geo. L. Hammons, Inc. (hammers)	1.92	
Public Service Company of Northern Illinois (power service)	1.50	
Willard Storage Battery Company (recharging and renting battery)	1.50	
Stebbins Hardware Company (padlocks)	1.20	
The Union Stock Yards & Transit Company (rent)	1.00	
		1,669.39
Law Department.		
John McGillen, Clerk (expenses of employes)	$ 17.55	
Martin Delaney (services rendered and expenses)	175.20	
Charles W. Vail (court costs)	54.30	
C. D. O'Callahan (witness fees)	50.00	
John McAuliffe (maintenance of automobile)	20.00	
Gunthorp-Warren Printing Company (printing)	16.20	
The B. F. Goodrich Rubber Company (casing)	13.20	
Walton & James (stenographic services)	11.00	
West Publishing Company (volumes of Federal Reporter)	7.50	
West Publishing Company (subscriptions to Pacific Reporter and Federal Reporter)	7.50	
Sam W. Irwin (subscription to Illinois Reports)	5.00	
Geo. I. Jones (American and English annotated cases)	5.00	
Burr-Vack Company (ink)	4.00	
A. B. Dick Company (stencil paper)	4.00	
Jas. D. Ahern Company (lettering on doors, main office)	3.00	
Underwood Typewriter Company (adjusting typewriters)	2.70	
Standard Oil Company (repairing buzzer system)	.91	
		397.06
Police Department.		
John McGillen, Clerk (expenses of employes)	$ 38.02	
Amounts carried forward	$ 38.02	$114,405.10

Amounts brought forward	$ 38.02	$114,405.10
Overland Motor Company (transformer case and shaft)	41.05	
Lawrence Kirk (oats, hay and straw)	14.65	
		93.72

General Account.

John McGillen, Clerk (postage stamps)	$ 200.00	
John M. Smyth Company (two wilton rugs for offices)	375.00	
John M. Smyth Company (one flat top desk, etc.)	276.00	
Fred Klein Company (printing Proceedings)	35.00	
Parker's Towel Supply Company (towel service)	26.00	
Commonwealth Edison Company (portable brass lamps)	13.96	
20th Century Press Clipping Bureau (clippings for month)	4.00	
		929.96

Illinois & Michigan Canal and Illinois River Conditions Department.

P. J. Weber (Cole heater)		27.25

Electrical Department.

John McGillen, Clerk (payroll first half of January, 1919)	$ 14,835.81	
Commonwealth Edison Company (electrical energy furnished as per contract dated October 15, 1918)	2,430.42	
Geo. L. Hammons, Inc. (waterproof flax packing)	275.79	
Geo. L. Hammons, Inc. (soft square hydraulic packing)	136.82	
Geo. B. Carpenter & Co. (manila rope, etc.)	75.85	
Inter-State Brass Company (brass rods, etc.)	11.41	
John McGillen, Clerk (expenses of employe)	5.10	
John McGillen, Clerk (freight charges on relays to 31st and Western avenue from Westinghouse Electric Mfg. Company)	1.97	
M. B. Austin & Co. (cable)	276.64	
The Texas Company (oil, kerosene and gasoline)	210.34	
Commonwealth Edison Company (watt meters)	181.57	
Commonwealth Edison Company (metal base, G. E. side straps)	116.14	
F. N. Buildhauser (labor and expenses of diver)	181.09	
Geo. L. Hammons, Inc. (hydraulic packing)	60.78	
Electrical Mfgs. Equipment Company (wire reel rack and device)	54.49	
Aurilla Scully (compensation for death)	50.00	
Patrick Brennan (personal injuries)	30.00	
Monarch Electric & Wire Company (solder salts)	14.11	
Chicago Feather Duster Company (brushes and handles)	8.92	
		18,957.25

Miscellaneous Accounts.

John McGillen, Clerk (weekly payroll for Stock Yards Station)—			
Construction Account	$ 121.20		
Maintenance and Operation Account	19.20		
		$ 140.40	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 37.26		
Maintenance and Operation Account	57.60		
		94.86	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 5.30		
Maintenance and Operation Account	74.23		
		79.53	
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 13.10		
Amounts carried forward		$ 314.79	$134,413.28

Amounts brought forward		$ 314.79	$134,413.28
Law Department	8.90		
Police Department	.65		
General Account	204.23		
Electrical Department	11.85		
		238.73	
			553.52
Grand Total			$134,966.80

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

GEORGE W. PAULLIN,
MATT A. MUELLER.
Committee on Finance.

Mr. Lawley moved that the report be adopted and the the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel (*except as to vouchers to the Auto Trimming & Painting Company for $637.50, and to the Commonwealth Edison Company for $2,430.42, on each of which Mr. Sergel voted "nay"*), Carr, Clark, Healy, Lawley, Littler, Mueller, Nance (*except as to vouchers to the Auto Trimming & Painting Company for $637.50, and to the Commonwealth Edison Company for $2,430.42, on each of which Mr. Nance voted "nay"*), and Paullin—Nine.

Nays—None *(except as above stated).*

ADJOURNMENT.

Mr. Clark moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk

TC423
January 23,

MAR 11 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO

REGULAR MEETING

THURSDAY, JANUARY 23, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meeting of January 2, of the special meeting of January 8, and of the regular meeting of January 9, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of December, 1918, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR DECEMBER, 1918.

Receipts.

Balance on hand at date of last report		$ 2,620,445.57
Electrical Department	$ 60,010.26	
Land Revenue Account	3,902.56	
Taxes on District Property	4,927.75	
James M. Dailey, Chairman Committee on Finance	1,500.00	
Bills Receivable	666.70	
Atchison, Topeka & Santa Fe R. R. Company	167.86	
Miscellaneous Engineering, Operating Expense, Maintenance and Operation	3.30	
Clerical Department	.50	
Interest on Bank Balance (Geo. M. Reynolds, Treas.)	3,230.53	
Total cash received for month		74,409.46
		$ 2,694,855.03

Expenditures.

Clerical Department	$ 2,724.97	
Law Department	7,647.39	
Electrical Department	81,353.82	
Treasury Department	208.33	
Police Department	7,003.63	
General Account	12,531.27	
Maintenance Account	63,087.41	
Construction Account	97,312.45	
Bond Account	543,000.00	
Bond, Interest and Premium Account	113,380.00	
Land Damages	2,218.40	
Illinois & Michigan Canal and Illinois River Conditions Department	2,035.81	
Cost of Law Cases	933.01	
Real Estate Department	596.25	
Total cash disbursed		$ 934,032.74
Balance this date in the Continental & Commercial National Bank		1,760,822.29
		$ 2,694,855.03

GEORGE M. REYNOLDS,
Treasurer.

By J. R. WASHBURN,
Asst. Treasurer.

Chicago, January 22, 1919.

The Clerk presented the report of the Chief Engineer for the month of October, 1918, which was ordered published and filed, as follows:

CHICAGO, November 1, 1918.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of October, 1918, giving the detailed operation of same.

CONSTRUCTION.

Chicago River, Main Outlet, South Branch and Its Forks.

The Brennan Construction Company, employed by the Northwestern Elevated Railway Company on the construction of a new dock on the cut-off line in front of the Union Loop Power House, continued operations throughout the month. The work consisted in plastering the wall of the power house and placing window frames and windows and painting same.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed no material from the spoil banks of this channel during the month.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, Contractor for the construction of this section, continued operations throughout the month. The work was carried on as follows: Excavating glacial drift by dragline in connection and turning basin between stations 969+00 and 974+25, Main Channel, from the 1st to 31st, working one 10-hour shift per day. Drilling rock in turning basin between stations 970+50 and 974+00 from the 1st to 31st, working one 10-hour shift per day. Blasting rock in turning basin between stations 970+00 and 974+50 from the 1st to 14th and on the 31st, working one 10-hour shift per day. Backfilling was done by locomotive crane No. 2, to level off lie-by between stations 60+00 and 65+00 from the 1st to 11th, working one 10-hour shift per day. Concreting standard retaining wall and turning basin wall between stations 3+50 and 2+50 on the 17th and from the 22nd to 31st, working one 10-hour shift per day. Pumping channel was carried on at station 28+00 throughout the month, working two 12-hour shifts per day. Miscellaneous work was carried on as follows: Excavating by hand and cleaning off walls between stations 968+00 and 973+00, Main Channel, from the 11th to 25th. Backfilling behind south wall by hand between stations 53+00 and 61+00 from the 25th to 31st. Force account work was carried on as follows: Building temporary dam at 48th avenue bridge on the 12th, 14th and 25th to 29th: Pumping channel for sections 2 to 12, inclusive, was carried on at section 1 by the contractor working under supplemental agreements, throughout the month. An average daily force of 78.5 men was employed. At the end of the month 92.7 per cent of the total estimated value of the contract was completed.

Section 13.

A. Guthrie & Co., Contractors, continued operations throughout the month. Hauling spoil from the cylinders of the Rock Island bridge with dinky engine and two dump cars from the 3rd to 25th, working one 5-hour shift per day; hauling concrete with same dinky engine and two dump cars from the mixer to the same bridge cylinders on the 26th, working one 10-hour shift. Team was engaged in hauling cinders to Western avenue

and Chicago street bridges from the 1st to 5th, and two teams hauling cinders to Chicago street bridge from the 7th to 11th, and to the Gregory street foot bridge on the 30th and 31st. An average daily force of seven men was engaged in spreading cinders for foot path on north approach to the Gregory street foot bridge on the 30th and 31st, working one 10-hour shift per day. An average daily force of one man was employed. At the end of the month 57.4 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Co., contractors for the construction of this section, continued operations throughout the month. Steam shovel No. 5 and four dinky engines and 18 dump cars were employed in excavating spoil from spoil bank and backfilling behind the north wall between stations 850+00 and 823+50 on the 1st, 2nd, 5th to 23rd and 28th to 31st, working one 10-hour shift per day. Team was engaged in grading the controlling works road from the 2nd to 4th, 11th, 12th and 28th, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 from the 3rd to 5th, working one 8-hour shift per day, and at station 837+00 on the 4th and 5th, working one 5-hour shift per day. Hand work was carried on as follows: Backfilling behind north wall between stations 852+00 and 838+00 from the 1st to 23rd and 29th to 31st, working one 10-hour shift per day. Cleaning channel bottom between stations 837+00 and 842+00 from the 7th to 21st, working one 10-hour shift per day. An average daily force of 51.9 men was employed. At the end of the month 99.8 per cent of the total estimated value of the contract was completed.

BRIDGES.

Western Avenue Bridge.

An average daily force of 9 men was employed by A. Guthrie & Co. in laying temporary pavement at the north approach of this bridge from the 1st to 4th, working one 10-hour shift per day.

Chicago Street Bridge.

An average daily force of 9 men was employed by A. Guthrie & Co. in building temporary road bridge across the channel at this point from the 1st to 8th, working one 10-hour shift per day.

Division Street Bridge.

An average daily force of 8 men was employed by A. Guthrie & Co. in removing concrete forms from the north abutment of this bridge from the 10th to 12th, working one 10-hour shift per day.

C. R. I. & P. Ry. Bridge.

A. Guthrie & Co. employed an average daily force of 6 men, working one 10-hour shift per day, in excavating south cylinders for east half of bridge from the 3rd to 10th and 14th to 25th; concreting same on the 26th. Shoring the northeast bank at the north abutment on the 13th. Building tower for concreting bridge piers from the 28th to 31st.

B. & O. and G. T. W. Ry. Bridges.

A. Guthrie & Co., Contractors, continued operations throughout the month. Steam shovel No. 3 and two dinky engines and 6 dump cars were engaged in excavating rock from channel between stations 747+25 and 746+75 from the 3rd to 12th, working one 10-hour shift per day. Jackhammer drills were engaged in drilling 9-foot holes in rock between stations 746+75 and 747+75 from the 1st to 10th, working one 10-hour

shift per day. Pumping channel was carried on at station 749+00 from the 1st to 31st, working one 8-hour shift per day. Hand work was carried on as follows: Building concrete tower for concreting the west half of the B. & O. bridge form the 23rd to 26th; building forms for concreting west half of the B. & O. bridge north abutment from the 28th to 31st, working one 10-hour shift per day. An average daily force of 14.9 men was employed.

The B. & O. Railway Company employed an average daily force of 13 men installing new interlocking system on the new diversion of the B. & O. (McCook Line) from the 1st to 31st; grading new B. & O. (C. C. Division) tracks between the channel and Stony Creek from the 5th to 7th and 10th and 11th, working one 10-hour shift per day.

C. R. I. & P. Ry. Connecting Track Bridge.

The Strobel Steel Construction Company employed a force of 6 men and derrick car No. 1 in unloading steel for the C. R. I. & P. connecting track bridge on the 7th, working one 10-hour shift per day.

Controlling Works.

A. Guthrie & Co. employed a force of 6 men cancreting lamp post bases on the north wall on the 3rd and 4th and removing concrete floor from recesses at the sector gates from the 17th to 24th, working one 10-hour shift per day.

G. P. Nichols, electrical contractor, employed an average daily force of 3 men setting machinery for the sector gates from the 1st to the 31st, working one 10-hour shift per day.

The Kelly-Atkinson Construction Company employed a force of 5 men placing ice cutters on the sectors gates from the 1st to 24th and 30th and 31st; placing screens on the northeast sector gate from the 25th to 29th, working one 10-hour shift per day on all work.

The Sanitary District organization employed an average daily force of 3 men in building machinery houses at the sector gates from the 1st to 31st, working one 8-hour shift per day.

The Colver Roofing Company was engaged in roofing the sewage discharge chamber on the 9th and 10th, and the northeast and southeast sector gates on the 12th, working one 8-hour shift per day.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 4.

Nash Brothers, Contractors, continued regular operations on the 16½-foot sewer on the 2nd and then suspended this part of the work until sewer section was placed under the Illinois Central R. R. The work progressed from station 181+76 to station 182+23. Work of excavating under the Illinois Central Railroad tracks by steam shovel was continued. The placing of the concrete section under the railroad was begun on the 5th and continued intermittently throughout the month, the concrete section being placed from station 185+25 to station 183+25. The disposal of earth by teams under the railroad was completed on the 21st, the balance of the earth being removed by dragline. An average daily force of 58 men and 12 teams was employed throughout the month. The work was 99.1 per cent completed at the end of the month.

Contract Section No. 5.

Byrne Brothers Dredging and Engineering Company, Contractors, started work on this section on the 31st, the work being the continuation of the regular operations on section

6. The sewer section was placed from station 84+95 to 85+35. The work was suspended at the end of the month. An average daily force of 56 men and 5 teams was employed on the 31st. The work was 0.4 per cent completed at the end of the month.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Company, Contractors, continued operations throughout the month, the sewer being constructed from station 80+64 to station 84+95, the latter station, being the northerly end of the contract section, was reached on the 30th. The crossing at 115th street was placed during the month, the tracks being cut to accommodate the construction of the sewer. An average daily force of 56.5 men and 5 teams was employed throughout the month. The work was 99 per cent completed at the end of the month.

Contract Section No. 7.

T. J. Forschner Construction Company, Contractors, continued operations until the 19th, on which date all work on this section was completed.

The work during the month consisted of cleaning up, grading, assembling weir gaging chamber and completing brick bulkhead at the east end of the work. An average daily force of 3 men was employed.

EVANSTON INTERCEPTING SEWER.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work of constructing piers for shore protection on the lake front near Lee street was continued until the 7th, on which date the pile driving was completed. This work was then suspended until the 28th, on which date the framing of the timber work was commenced. The work on the 3½ foot sewer on the lake front was completed on the 10th. The work consisted of excavation by hand and by a Moore machine and placing of concrete. The work progressing from station 89+09 to station 92+99, the latter station being the south limit of the contract.

The work on the 6-foot sewer in Elmwood avenue, in tunnel, was continued to the 9th, when it was completed. The sewer being placed from station 15+88 to station 14+98.5. The tunnel work was continued from the shaft at Elmwood avenue near Lee street, on the 4½-foot sewer until the 28th, when it was completed. The work progressing from station 36+32 to station 39+56.

The work on the 4½-foot sewer in Custer avenue, in tunnel, was continued to the 30th, the work being completed on this date. The work progressed from station 42+49 to station 39+56, and from station 55+71 to station 58+30.

The work on the 4-foot sewer in Custer avenue, open cut, was continued until the 29th, when it was completed, the sewer being placed from station 62+10 to station 69+80.

The work on the 3½-foot sewer in Custer avenue was begun on the 29th and continued throughout the month, the sewer being placed from station 69+80 to station 70+12.

The work on the 6-foot sewer in Lake street, in open cut, was continued throughout the month, the work progressing from station 96+78 to station 99+76. This section of the sewer was completed on the 31st.

The placing of the 18-inch tile sewer in Washington street under the C. & N. W. Ry. was commenced on the 28th and continued throughout the month, the work being done in tunnel and consisted of drifting and timbering preparatory to place the tile sewer.

The work of constructing a special manhole in Lake street, just east of Elmwood avenue, to serve as a pumping shaft for temporary pumping service pending the completion of the Evanston pumping station, was begun on the 17th and suspended on the 28th. The work done consisted of excavating and timbering of the shaft. An average daily force of 197 men and 0.5 teams was employed. The work was 94 per cent completed at the end of the month.

DES PLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, contractors, continued preliminary operation on this contract until the 3rd, on which date work was suspended due to the lack of priority certificates under which to proceed with the work. Minor work such as cleaning up and watching was continued until the 17th on which date all work was suspended. An average daily force of 7 men was employed.

Pumping Stations.

CALUMET SEWAGE PUMPING STATION.

T. J. Forschner Contracting Company, contractors, continued operation throughout the month. The month. The excavation of the substructure was carried on throughout the month, the material being excavated by dragline and rehandled and placed in spoil banks by a second dragline. The first concrete on the work was placed on the 19th, on which date a portion of the bottom of the suction chamber was placed. The placing of concrete was carried on intermittently from the 19th to the end of the month. An average daily force of 47 men was employed throughout the month.

Maintenance and Operation.

MAIN CHANNEL.

Walls.

The Sanitary Distrinct organization employed a force of 18 men operating the "cement gun" throughout the month plastering about 16,250 square feet of the west wall between Romeo and the controlling works, a length of 2300 feet, with a mixture of one part cement to three parts sand.

BRIDGES.

Minor repairs were made to the floors of the bridges at Summit and Lemont by the Sanitary District organization during the month.

CONTROLLING WORKS.

In order to maintain the flow required by law the bear trap dam at the controlling works was open some part of two days or a total of eight hours and twenty-five minutes; an average of twenty-three minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 36 men throughout the month, cutting out disintegrating concrete and replacing same with portland cement concrete. About 190 cubic yards of concrete was replaced on the east wall just south of 16th street, Lockport.

BRIDGES.

Ninth and Sixteenth Street Bridges.

A heater was made for the 16th street bridge, the motors were repaired on the 27th and the heater was repaired on the 29th. Two men were on duty on these bridges, working form 7 A. M. to 3 P. M., and from 3 P. M. to 11 P. M. Each man caring for both bridges.

BUTTERFLY DAM.

This dam was operated on the 6th, 13th, 20th and 27th. The spot lights were repaired on the 8th. The heaters were repaired on the 9th. A heater was made on the 31st.

DAMS AT THE POWER HOUSE.

On order to maintain the flow of water required by law the forty-eight foot dam at the power house was open some part of twelve days or a total of forty-seven hours and forty minutes; an average of one hour and thirty-two minutes for each day of the month. The twelve foot dam was open some part of one day or a total of two hours and fifty-five minutes; an average of five minutes for each day of the month.

Samples of canal water were taken every 8 hours for the Sanitary Division. Three men were on duty working shifts of 8-hours throughout the month.

I. & M. CANAL LOCK AT THE POWER HOUSE.

Fifteen boats passed through the lock during the month. The boats were locked through by the dam tender. The folowing repairs were made during the month: Key sockets were intalled in the lock house, gages were painted on the 8th and 22nd; the lock circuit was repaired on the 13th and cleaned of grounds on the 14th.

POWER HOUSE (ELECTRICAL DEPARTMENT).

The Sanitary District organization continued the work of repairing the head gates at the power house until the 10th, when the bulkhead was removed.

NORTH SHORE CHANNEL.

Outfalls and Ditches.

The Sanitary District organization employed a force of 17 men and one team throughout the month cutting weeds and cleaning out the ditches west of the channel between Howard and Touhy avenues, and filling in a gully east of the channel about 500 feet south of Oakton avenue. Also a force of 10 men and a foreman was engaged form the 21st to the 29th on the work of completing the ditching on the north side of Oakton avenue west of the channel, which was left unfinished by the contractor for the Niles Center sewer outfall. This work was done at a cost of $370.75.

BRIDGES.

The Sanitary District organization completed the painting of the steel work and laying the new sidewalk of the Peterson avenue bridge on the 7th. All usable material from the old floor and new material left over stored at Irmiter's yard on Lincoln and Peterson avenues. The water pipes on the Hill street and Lincoln avenue bridges were repaired. The steel work of the Lincoln avenue bridge was partly painted. Minor repairs were made to the bridges at Lincoln, Bryn Mawr, Devon, and Howard avenues during the month.

PUMPING STATION.

Thirty-ninth Street Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows: Sewer pump No. 1 was operated some part of one day or a total of twenty hours. Pump No. 4 some part of thirty-one days or a total of seven hundred and forty-two hours and fifty minutes. The two pumps were operated for a grand average of eight hours and twenty-six minutes for each day of the month and pumped an average of 6551 cubic feet of sewage for each minute of the month. The sewer pump No. 2 was shut down the entire month.

The fresh water pumps Nos. 5 and 6 were each operated for some part of three days or a total of forty-eight hours and fifty minutes, an average of 5830 cubic feet of water for each minute of the month.

The steam turbine and generator were not operated. Sewage pumping engine No. 3 was not operated all month, being overhauled. Painting

of the steel framework supporting the runway for the overhead coal crane was begun on the 16th and continued throughout the month. The construction of the housing for the coal crane was completed on the 14th. The coal crane out of service for a general overhauling the last two weeks of the month.

The Great Lakes Dredge and Dock Company, contractors for repairing the breakwater at this station, continued operations throughout the month. The work consisted of redriving the four seven pile clumps at the intake entrance, sawing off breakwater piles and putting in wales, excavating for and placing back logs and anchor rods.

Lawrence Avenue Pumping Station.

This station was operated pumping sewage throughout the month. The pumps were operated as follows: Sewer pump No. 2 was operated some part of fourteen days or a total of two hundred and seventeen hours and twenty minutes. Pump No. 3 some some part of twenty-five days or a total of five hundred and forty hours. The two pumps were operated for a grand average of twelve hours and thirteen minutes for each day of the month and pumped an average of 2924 cubic feet of sewage for each minute of the month. Sewer pump No. 1 was shut down the entire month. Fresh water pump No. 4 was operated some part of seventeen days or a total of two hundred and ninety-six hours and forty-five minutes; an average of nine hours and thirty-four minutes for each day of the month, and pumped an average of 7555 cubic feet of water for each minute of the month. The coal conveyor was out of service for repairs from the 20th to the end of the month. One of the sewage screens was out of service after the 24th, due to the twisting of some steel angles.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The operation of the pumps was as follows: Pump No. 1 was operated some part of twenty-four days or a total of four hundred and seventy-four hours and eighteen minutes. Pump No. 2 some part of twenty-three days or a total of six hundred and seven hours and thirty-one minutes.

Pump No. 3 some part of thirty days or a total of six hundred and ninety-six hours and forty-eight minutes. Pump No. 4 some part of twenty-six days or a total of five hundred and fifteen hours and twenty-six minutes. All of the four pumps were operated for a grand average of eighteen hours and thirty minutes for each day of the month and pumped an average of 39296 cubic feet of water for each minute of the month. The brick pavement in the roadway at this station was repaired during the month.

STRUCTURES AND EQUIPMENT FOR SANITARY IMPROVEMENTS AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at Thirty-ninth Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru, and Chillicothe. Special analyses were made on samples shipped from Lockport. Special analyses were made of samples collected from a 24-hour test of the sewage disposal plant at Fort Sheridan and samples collected from a special trip down the Main Channel.

Stock Yards Testing Station.

The dismantling of this station was begun and continued throughout the month.

Sewer and Rain Gauges.

Rain gages were operated at the 39th street pumping station, Stock Yards Testing Station, Lockport, Kensington, and at 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

A special investigation was made of the sewage treatment plant at Fort Sheridan extending over 24 hours on the 17th and 18th.

A trip was made down the Main Channel on October 24th in company with Prof. Earle B. Phelps, (U. S. Public Health Service) and Col. I. C. Mehaffey, (U. S. Engineers). On the 23rd and 25th inspection was made of the north shore and Calumet districts.

ENGINEERING.

Drafting Division.

The work done during the month consisted of the sollowing: Revising negative of the real estate wall map; preparing Chicago River notes; preparing Calumet sewer atlas; indexing data at warehouse; compiling Calumen-Sag atlas; indexing and filing maps and plans; copying section corner notes for permanent files; printing index cards; copying records at the County Building for Calumet-Sag atlas; writing monthly reports of Calumet-Sag construction; revising index system; proofreading monthly reports of the Engineering Department; coloring maps for Law Department on the Will County Tax Case; preparing an ordinance map for the Calumet sewer; compiling Chicago River atlas started; preparing maps and negatives for the Zuidema Case on Calumet-Sag overflow.

Bridge Division.

Work was continued on the design and details of the reinforced concrete work for the Calumet Sewage Pumping Station. The design for the temporary dam at 48th avenue bridge across the Calumet-Sag Channel was completed and a bill of material was made.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Des Plaines River treatment works was continued. Conferences were held with village officials. The preparation of supplementary plans for the Calumet Sewage Pumping Station was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed re-arrangement of the 95th Street Pumping Station and a report was made on same. Conferences with Mr. A. B. Wood on Evanston Pumping Station bids, 95th Street Pumping Station and Calumet and Des Plaines Pumping Stations. Estimates prepared on temporary pumping at Evanston. Prices were obtained on standard and special pumps. Specifications were prepared for temporary pumping at Evanston.

Hydraulic Measurement Division.

The self-registering gages in the Main Channel at Willow Springs and Lemont and on the Lake front at the

U. S. Coast Guard Station were operated and periodically inspected. The records for these gages were worked up in the office.

FIELD PARTIES.

Party was employed on Chicago River dredging and docking, Union Loop Power House inspection, re-running base lines and painting stations on dock. Outfall repairs and office work on sloping on the North Shore Channel. Crib repairs at the 39th Street Pumping Station. Spoil bank measurements on Section 8 of the Main Channel.

The Calumet-Sag field parties per formed the usual routine construction duties as follows: The Sag Division on Section 1. The Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections, keeping the accounts of the department, preparing vouchers, furnishing information for other departments and other necessary duties, etc.

Respectfully submited,

G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 23, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance begs to report that bonds numbered 29371 to 29398, both inclusive, of the nineteenth issue of The Sanitary District of Chicago to the amount of twenty-eight thousand ($28,000.00) dollars will mature February 1, 1919.

Your Committee further reports that the semi-annual interest on the nineteenth issue of bonds of The Sanitary District of Chicago, amounting to the sum of four thousand four hundred ($4,400.00) dollars, will also fall due February 1, 1919, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are, hereby instructed to draw a warrant, payable to the order of the Treasurer of The Sanitary District of Chicago, for the sum of thirty-two thousand four hundred ($32,400.00) dollars, to pay the principal and semi-annual interest due February 1, 1919, on the bonds of The Sanitary District of Chicago as follows:

The principal of 28 bonds numbered 29371 to 29398, both inclusive, of the Nineteenth issue	$28,000.00
Six months' interest on $220,000.00 of the Nineteenth issue at 4%	4,400.00
Total	$32,400.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 23, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Chief Engineer in which he states that Patrick A. Nash and Richard J. Nash, co-partners doing business as Nash Brothers, Contractors for Section 1 of the Desplaines River Intercepting Sewer, have delivered at the site of said work 101,660 pounds of cast iron pipe, for which they paid the sum of $3,464.95, which pipe cannot be placed in said work for some time, and they have requested the Sanitary District to advance to them the actual cost of said pipe. He further states that the contract specifies that the sum of six cents per pound shall be paid to said Contractors for said cast iron pipe when placed in said work, and recommends that said Contractors be advanced the sum of three cents per pound on said pipe, or a total of $3,049.80.

Your Committee, having considered the matter, is of the opinion that the foregoing request of Nash Brothers should be granted on the condition that they execute and deliver to the Sanitary District a bill of sale of said pipe, and agree to safeguard the same against breakage, theft or other loss, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby, authorized and directed to pay to Patrick A. Nash and Richard J. Nash, co-partners doing business as Nash Brothers, the sum of $3,049.80 upon the execution by them and delivery to the Sanitary District of a bill of sale of said pipe, and an agreement in connection therewith that they will safeguard the said pipe against breakage, theft or other loss, and also upon their furnishing the Sanitary District a consent in writing by the surety on their bond that said payment may be made and said bill of sale may be executed.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Healy, Lawley, Littler, Mueller, Nance and Paullin—Six.

Nays—Mr. Sergel—One.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 23, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of January payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

Burr-Vack Co. (transfer cases)	$ 65.00	
Public Service Co, of Northern Illinois (installing light connections)	60.00	
J. Korte (coal)	34.25	
Chicago Towel Co. (towel service)	24.75	
J. J. McGraw (coal)	15.76	
Nelson Bros. Laundry Co. (towel supply)	1.00	
A. Guthrie & Co. (extra work on Sec. 13, Calumet-Sag Channel)	27.04	
A. Guthrie & Co. (extra work on Sec. 14, Calumet-Sag Channel)	25.19	
John McGillen, Clerk (stock yards testing station weekly payroll)	161.20	
		$ 414.19

Maintenance and Operation Account.

John McGillen, Clerk (special roll repairs to Main Channel bridges, first half of January)	$ 313.20	
John McGillen, Clerk (repairs to walls among Main Channel, first half of January)	216.00	
John McGillen, Clerk (freight charges paid I. C. R. R. Co. hauling fuel to 39th St. Pumping Station	507.47	
John McGillen, Clerk (special roll repairs to boilers at 39th Street Pumping Station)	154.00	
John McGillen, Clerk (freight charges to I. C. R. R. hauling fuel to Lawrence Ave. Pumping Station)	75.12	
John McGillen, Clerk (25 ride ticket to Lockport)	11.88	
John McGillen, Clerk (freight charges paid to C. & A. R. R. fuel to Lawrence Ave. Pumping Station)	1.00	
John Wolms (team service)	200.00	
Wilcoxson Coal & Coke Co. (coal)	207.46	
Buissono Bros. Mfg. Co. (repair parts)	166.02	
David G. Murray (teaming)	156.21	
Keystone Coal & Mining Co. (coal)	86.01	
Crane Co. (repairing valves)	83.00	
Chicago Fire Brick Co. (repair parts)	65.00	
Geo. B. Carpenter & Co. (manila rope)	60.28	
H. W. Johns-Manvile Co. (cement)	47.60	
G. Johnson (teaming)	30.00	
Marshall Field & Co. (muslin)	18.41	
The Carl Anderson Co. (labor)	13.50	
Dan Smith Motor Co. (radiator cover, etc.)	18.00	
Parkers Towel Supply Co. (towel service)	11.20	
Hinckley & Schmitt (drinking water)	8.50	
The Lunkenheimer Co. (angle valve and brass union)	5.33	
Chas. Novak & Son (plate glass)	2.58	
Parkers Towel Supply Co. (towel service)	1.60	
		2,459.37

Illinois & Michigan Canal and Illinois River Conditions Department.

E. H. Heilbron (expenses)	$ 20.84	
		20.84

Law Department.

Leo Spitz (legal service)	$ 100.00	
Walton & James (stenographic services)	41.50	
Hotel Jefferson (expenses of investigator)	4.00	
		145.50
Amount carried forward		$ 3,039.90

Amount brought forward		$ 3,039.90
Clerical Department.		
John McGillen, Clerk (expenses of employees)	$ 17.05	
Standard Oil Co. (labor and material)	16.70	
Nelson-Eismann-Quist Co. (bond paper)	12.75	
Lewis W. Eipers, Clerk Township of Lockport (furnishing records)	10.00	
Dalton Adding Machine Co. (adding machine paper)	5.85	
		62.35
Real Estate Department.		
City Collector—City of Chicago (inspection charges)	$ 1.00	
		1.00
General Account.		
Standard Oil Co. (rental main office, electric light and ice service)	$ 2,684.04	
John M. Smyth Co. (office chairs and glass plate)	245.00	
Fred Klein Co. (printing proceedings)	551.00	
Eugene J. Holland (services in re Lake Level controversy)	175.00	
The Bradstreet Co. (subscription)	175.00	
Robert S. Leete Co. (bond paper)	24.00	
Jas. D. Ahern Co. (lettering doors main office)	15.00	
The Fred J. Ringley Co. (printing)	15.00	
Walger Awning Co. (taking down and cleaning awnings)	9.20	
A. B. Dick Co. (stencil paper)	5.00	
A. Hannibal (repairing arm chair)	2.00	
		3,900.24
Electrical Department.		
John McGillen, Clerk (weekly payroll)	$ 356.40	
John McGillen, Clerk (weekly payroll)	328.62	
John McGillen, Clerk (payroll Stock Yards Testing Station)	175.60	
John McGillen, Clerk (expense of employee)	20.70	
John McGillen, Clerk (freight charges on meter parts)	1.16	
Commonwealth Edison Co. (electric switch)	481.16	
Commonwealth Edison Co. (switch)	415.11	
Commonwealth Edison Co. (oil switches)	443.62	
Commonwealth Edison Co. (oil switch)	404.00	
Commonwealth Edison Co. (oil switch)	382.75	
Commonwealth Edison Co. (wattmeters)	185.28	
General Electric Co. (current transformers)	483.60	
Humphrey & Sons Co. (pressure and suction valves)	443.87	
Humphrey & Sons Co. (pressure and suction valves)	368.86	
Standard Underground Cable Co. (wire)	311.77	
Western Electric Co. (bending posts)	233.27	
Western Electric Co. (current transformers)	113.30	
Sinclair Refining Co. (gasoline)	284.28	
The United States Aluminum Co. (tie wire)	242.16	
Union Petroleum Co. (gasoline)	239.20	
The Texas Co. (oil and gasoline)	225.50	
Gibbons Bros. (tires)	214.70	
Naugle Pole & Tie Co. (cedar poles)	181.50	
Belden Mfg. Co. (wire)	123.90	
Wilbur J. Connell (supplies)	113.74	
Wilbur J. Connell (hardware)	26.99	
Belden Mfg. Co. (wire)	95.05	
L. L. Fleig & Co., Inc. (wire and oiled paper)	86.94	
Thos. F. Ryan (lumber)	71.99	
Geo. H. Carpenter & Co. (manila rope)	66.90	
Amount carried forward	$ 7,121.92	$ 7,003.49

Amount brought forward	$ 7,121.92	$ 7,003.49
The Lombard Governor Co. (repairing relay valve sleeves)	58.44	
Monarch Electric & Wire Co. (fuses)	51.70	
Westinghouse Electric & Mfg. Co. (meter paper)	54.00	
Westinghouse Electric & Mfg. Co. (current coils)	40.80	
L. L. Fleig & Co., Inc. (tape)	40.42	
Exide Battery Depots, Inc. (wood separators, complete)	45.60	
G. & W. Electric Specialty Co. (caps)	40.00	
Buchanan Daley Co. (coal)	39.23	
John Bigane & Sons (coal)	37.50	
Zenks Hotel (suppers and lodging for linemen)	36.95	
Western Electric Co. (wood conduit plugs)	36.75	
Hydrox Co. (coupon books)	32.00	
Central Electric Co. (weed chains)	30.46	
G. Johnson (teaming)	30.00	
Westinghouse Electric & Mfg. Co. (graphic charts)	27.87	
G. J. Cushing (personal injuries)	26.00	
Rienzi Garage (storage charges)	24.50	
Stebbins Hardware Co. (cotter pins, etc.)	16.02	
Staehely Bros. (vulcanizing)	15.12	
Standard Oil Co. (gasoline)	12.77	
A. C. Miller (gasoline)	12.65	
A. Hannibal (repairing office chairs)	12.00	
Lynch-Clarisey Co. (tallow compound)	10.00	
L. Gould & Co. (brooms)	9.28	
L. Gould & Co. (paper)	8.33	
The Wilson Rubber Co. (acid mittens)	8.66	
Whitney & Ford (pipe, nipple and flanges)	8.37	
Miller Hardware Co. (stencil brush, etc.)	4.75	
H. M. Hooker Glass & Paint Co. (benzine)	4.70	
Exide Battery Depots, Inc. (hydrometers)	4.53	
Stromberg Motor Devices Co. (repairing carburetor)	2.90	
Paragon Metal Products Co. (bronze)	2.75	
Henry Stuckart (bolts)	2.74	
Hummel Light & Fixture Co. (flashlight complete)	1.88	
Underwood Typewriter Co., Inc. (repairing typewriter)	.75	
		8,112.01
Miscellaneous Accounts.		
John McGillen, Clerk (expenses of employes)—		
Construction Account $13.19		
Maintenance and Operation Account 4.64		
	17.83	
John McGillen, Clerk (expenses of employes)—		
Construction Account $ 4.37		
Maintenance and Operation Account 1.16		
Real Estate Department 6.30		
	11.83	
John McGillen, Clerk (expenses of employe)—		
Maintenance and Operation Account $ 3.45		
Electrical Department 4.40		
	7.85	
Chicago Telephone Co. (service)—		
Construction Account $71.33		
Maintenance and Operation Account 67.20		
Real Estate Department .30		
	138.83	
The Fred J. Ringley Co. (printing)—		
Clerical Department $120.50		
General Account 9.75		
	130.25	
Amount carried forward	$ 306.59	$ 15,115.50

Amount brought forward		$ 306.59	$ 15,115.50
Burr-Vack Co. (ink, etc.)—			
Clerical Department	$24.25		
General Account	2.50		
		26.75	
			333.34
Grand Total			$ 15,448.84

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, January 23, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contract with the National Conveying Equipment Corporation, 1750 Kolmar avenue, wherein said corporation agrees to take and the Sanitary District agrees to furnish electrical energy for the period therein mentioned and upon the terms and conditions therein set forth. Said contract has been approved by the Electrical Engineer.

Your Committee, therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contract, which has been properly executed by said corporation.

Respectfully submitted,

H. E. LITTLER,
Chairman.
MATT. A. MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, January 23, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a

communication from the Chief Engineer in which he states that the work covered by the contract of Richard J. Nash and Patrick A. Nash, co-partners doing business as Nash Bros., dated June 29, 1916, (page 779 of the Proceedings) for the construction of contract Section 4 of the Calumet Intercepting sewer has been completed in accordance with all the terms and conditions of the contract and to his satisfaction, except as to the time of completion. It appears from said final certificate that there was a default of 192 days in the completion of said work due to a delay on the part of the Illinois Central Railroad Company in constructing a temporary bridge for its tracks at the sewer crossing on 104th street and to delays due to war conditions, and the Chief Engineer extended the time for the completion of said work for a period of time equal to the delays in question.

The Chief Engineer further states that he has deducted the sum of $1,000.00 from the amount due the contractors to be paid them when the question as to whether additional compensation should be paid said Contractor for the increased cost of said work due to war conditions is settled.

Your Committee having read said final certificate of the Chief Engineer hereto attached is of the opinion that the sum of $5,383.66, found to be due the contractor after deducting said sum of $1,000.00, should be paid and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago and the Clerk be, and they are hereby authorized and directed to pay to Richard J. Nash and Patrick A. Nash, co-partners doing business as Nash Bros. upon the voucher of the Chief Engineer said sum of $5,383.66 upon the execution by them of a receipt in full of all claims and demands arising out of or resulting from the performance of the work under said contract, except as to said sum of $1,000.00 withheld by the Sanitary District as above stated, and as to all unsettled bills for extra work, and also upon the execution of an affidavit by them that all materialmen, mechanics and workmen employed by them under said contract, have been paid in full and also upon their furnishing the Sanitary District with a consent in writing by the surety on their bond that said payment may be made, said payment, however, to be made subject to any unaccrued obligations imposed by said contract.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
H. E. LITTLER,
MATT A. MUELLER.
Committee on Engineering.

FINAL CERTIFICATE.

CHICAGO, January 21, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I hereby certify that Patrick A. Nash and Richard J. Nash, co-partners doing business as Nash Brothers, have completed all work under their contract dated June 20, 1916 (pages 779-824 of the Proceedings for the construction of contract section 4 of the Calumet Intercepting Sewer in accordance with all the terms and conditions of said contract, and to my satisfaction, except as to the time of completion.

Under the terms of said contract, the Contractor agreed to begin the work within thirty days from the date of the approval by the Board of their bond, and to entirely complete said work on or before May 1, 1918.

There was a delay of 192 days in the performance of said work due to the fact that the Illinois Central Railroad Company had not completed a temporary bridge at the crossing of said sewer with the right-of-way of said railroad on the line of 104th street, and there were also delays due to war conditions. The delay on the part of the Railroad Company amounted to 65 days, and the delays due to war conditions amounted to 173 days, or a total of 238 days. I have allowed said Contractor an extension of time in which to complete said work of 192 days, which is less than the total days delay which was occasioned by the causes mentioned.

I have deducted from the total sum due said Contractor the sum of One Thousand ($1,000.00) Dollars, to be withheld by the Sanitary District until the question of whether or not additional compensation shall be paid to said Contractor for the increased prices of labor and material which entered into said intercepting sewer due to war conditions has been settled.

I recommend that the sum of Five Thousand Three Hundred Eighty-Three and Sixty-Six One Hundredths ($5,383.66) Dollars be paid to said Contractor at this time.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, January 23, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it is advised that on May 27, 1903 (page 9335 of the Proceedings) the Board authorized the President and Clerk to execute a certain agreement between the Sanitary District and Ernst Heldmaier by the terms of which the dock line on the Chicago river in front of his property adjacent to Throop street was established. A small triangular strip of land was to be excavated and become part of the Chicago river, another small triangular strip of land was to be filled in and a dock constructed by the Sanitary District along the new dock line. It appears that said agreement was executed by Mr. Heldmaier and his wife Mina (who is now deceased) and all the work specified in said agreement was performed in the year 1902 or 1903 but said agreement has been lost or mislaid and Mr. Heldmaier now requests that a duplicate of said agreement be executed and delivered to him.

Your Committee having considered the matter, is of the opinion that the request of said Ernst Heldmaier above set forth should be granted, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be and they are hereby authorized and directed to execute a duplicate of said agreement when the same has been duly executed by said Ernst Heldmaier.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
H. E. LITTLER,
MATT A. MUELLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillon,

Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, JANUARY 30, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll call being called there were:

Present—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Absent—Messrs. Clark and Sergel—Two.

President Sergel being absent, Mr. Lawley moved that Mr. Paullin act as temporary chairman of the meeting.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meetings of January 16, 1919, and January 23, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Chief Engineer for the month of November, 1918, which was ordered published and filed, as follows:

CHICAGO, December 1, 1918.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of November, 1918, giving the detailed operation of the same:

CONSTRUCTION.

CHICAGO RIVER, MAIN OUTLET, SOUTH BRANCH AND ITS FORKS.

The Brennan Construction Company, contractors employed by the Northwestern Elevated Railroad Company on the construction of a new dock in front of the Union Loop Power House, carried on the construction of the new wall of the power house east of the new cut-off line. The work done during the month consisted of painting windows and general cleaning. All work was completed on the 14th.

NORTH SHORE CHANNEL.

Removal of Spoil Banks.

The National Brick Company removed no materials from the banks of the channel during the month.

CALUMET-SAG CHANNEL.

Section No. 1.

J. O. Heyworth, contractor for the construction of this section, continued operations throughout the month. Dragline was engaged in excavating glacial drift in the connection and turning basin at station 975+00 (M. C.) on the 1st and 2nd, and in backfilling behind north and south walls between stations 3+00 and 19+25 from the 8th to 30th, working one 10-hour shift per day. Drilling rock in turning basin was caried on between stations 973+00 and 974+00 (M. C.) from the 1st to 5th and at station 975+00 (M. C.) on the 23rd, working one 10-hour shift per day. Blasting rock was carried on at station 975+00 (M. C.) on the 24th, working one 5-hour shift. Concreting the standard retaining wall between stations 3+00 and 3+50 and the turning basin walls between stations 0+00 and 5+75 from the 1st to 30th. Pumping channel was carried on at station 28+00, working two 12-hour shifts per day throughout the month. Miscellaneous work consisting of the following was carried on: Digging test holes in basin from the 1st to 7th; excavating by hand in the turning basin on the 2nd and 18th to 30th; finishing off on walls from the 3rd to 30th; open dam at Archer Road, on the 8th and 10th. Force account work was carried on as follows: Building temporary dam between abutments of 48th avenue bridge from the 10th to 29th. Pumping channel for sections 2 to 12, inclusive, was carried on at this section by the contractor under supplementary agreements, throughout the month. An average daily force of 77.4 was employed. At the end of the month 95.5 per cent of the total estimated value of the contract was completed.

Section 13.

A. Guthrie & Co., Inc., contractors, carried on operations as follows: Mixing concrete for Rock Island bridge pier on the 25th and 26th and hauling same to bridge with dinky engine and two dump cars; team was engaged in hauling cinders for foot path at Gregory street on the 1st, 2nd, 10th and 15th. The following hand work was carried on by a force of 13 men: Spreading cinders for foot path at north approach of Gregory street on the 1st and 2nd, building foot bridge across Stony Creek diversion (Gregory street) from the 4th to the 6th; building foot bridge across channel at Gregory street on the 9th, 10th, 12th, 13th, 15th, 26th, 27th, 29th and 30th; all the aforementioned work was carried on in one 10-hour shift per day. At the end of the month 58 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Co. Inc., contractors, continued operations throughout the month. Steam shovel No. 5 was engaged in excavating spoil from spoil bank between stations 823+50 and 834+50, to be used for backfilling behind north wall, from the 1st to 16th and 20th to 30th, working one 10-hour shift per day. Four dinky engines and 18 dump cars were engaged in hauling spoil from shovel No. 5 to north wall between stations 839+00 and 845+00 from the 1st to 16th and 20th to 30th, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 on the 1st, 4th, 12th, 18th, 19th, 28th and 29th, and at station 837+00 on the 1st, 4th, 12th, 18th to 20th, 28th and 29th, working one 5-hour shift per day. Two teams were engaged in grading the Controlling Works road from the 6th to the 16th, 19th, 20th, and 23rd to 25th, working one 10-hour shift per day. An average daily force of 56.6 men was employed. At the end of the month 99.8 per cent of the total estimated value of the contract was completed.

BRIDGES.

C. R. I. & P. Ry. Bridges.

A. Guthrie & Co., Inc., contractors, employed an average daily force of 8 men building forms for south cylinder east half of bridge from the 1st to 4th and 6th working one 10-hour shift per day, concreting same on the 5th and 7th, working one 5-hour shift per day. Building forms for the south pier from the 18th to 22nd; placing reinforcing metal on the 23rd and 24th; concreting same on the 25th and 26th, working one 10-hour shift per day. An average daily force of 6 men was employed in excavating for the north abutment on the 23nd, 26th, 27th, 29th and 30th, working one 10-hour shift per day.

The C. R. I. & P. Ry. Company employed an average daily force of 8 men and derrick car and locomotive in moving slabs for the bridge from Lambrechts coal yard to the Rock Island right of way on the 12th and 13th, working one 10-hour shift per day, and an average force of 6 men covering 12-inch water main with burlap at the north abutment on the 29th and 30th, working one 10-hour shift per day.

The Schillinger Construction Co., employed an average daily force of 9.5 men building forms for concrete floor slabs for east bound track bridge at Lambrecht's coal yard at 123rd street, Blue Island, from the 18th to 30th, and concreting floor slabs from the 22nd to the 30th, working one 10-hour shift per day.

Division Street Bridge.

The Kelly-Atkinson Construction Company employed an average daily force of 9 men unloading steel for and erecting derrick from the 18th to 27th, cleaning and painting I-beams, connections, and railing on the 29th and 30th, working one 8-hour shift per day.

B. & O. and G. T. W. Ry. Bridge.

A. Guthrie & Co. Inc., contractors, employed an average daily force of 11.8 men concreting west half of north abutment of the B. & O. bridge from the 4th to 6th, working one 10-hour shift per day and from the 11th to 16th working one 6-hour shift per day. Pumping channel was carried on at station 749+00 from the 1st to 17th working one 8-hour shift per day. Building forms for concreting the west half of the north abutment of the B. & O. bridge was carried on (hand work) on the 2nd and from the 6th to 18th.

The B. & O. Ry. Company employed an average daily force of 8 men placing guard rails on new B.

& O. (C. C. Division) bridge on the 1st and 2nd; installing interlocking system on the new B. & O. (McCook Line) diversion from the 1st to 30th, working one 10-hour shift per day.

CONTROLLING WORKS.

A. Guthrie & Co., contractors, carried on the following work: Drilling concrete on sector gate recesses from the 18th to 24th and removing same from the 16th to 24th, working one 10-hour shift per day. Cleaning channel bottom between stations 841+00 and 848+00 from the 18th to 27th, working one 10-hour shift per day.

G. P. Nichols, electrical contractor, employed an average daily force of 3 men setting machinery for the southeast sector gate from the 1st to 4th, working one 10-hour shift per day.

The Kelly-Atkinson Construction Company, employed an average daily force of 6 men, working one 10-hour shift per day, placing ice cutters on the northwest and southeast sector gates from the 1st to 13th; painting steel northeast sector gate from the 14th to 16th and 21st to 24th; on the southeast sector gate from the 25th to 30th; placing angle bars on the southeast sector gate from the 17th to 20th.

The Sanitary District organization employed an average daily force of 6.5 men building machinery houses for the southwest, northwest and northeast sector gates from the 1st to 30th, working one 8-hour shift per day.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 4.

Nash Brothers, contractors, continued the placing of concrete section until the 9th, when all concrete work under this contract was completed. Work of dismantling the plant and placing backfill, etc., was carried on for the balance of the month. An average daily force of 35.5 men and 6 teams was employed.

Contract Section No. 5.

Byrne Brothers Dredging and Engineering Company, contractors, performed the work of backfilling until the 7th on which the work was suspended for the balance of the month. The work remaining 0.4 per cent complete. An average daily force of 27 men and 3 teams was employed from the 1st to the 7th.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Company, continued operations throughout the month. The work of grading and cleaning the streets was carried on intermittently through the month. The work of repairing the 54-inch sewer in Indiana avenue near 123rd street was begun on the 12th and continued throughout the month. An average daily force of 24.5 men and 2 teams was employed. The work remained as reported 99 per cent complete.

EVANSTON INTERCEPTING SEWER.

Nash-Dowdle Company, contractors, continued operations throughout the month. The work of constructing piers as a shore protection on the lake front near Lee street was continued and completed at the end of the month. On the 4½-foot sewer, in tunnel, on Custer avenue, the work of cleaning and removing of spoil bank at the shaft was continued throughout the month. The work of constructing the 3½-foot sewer in Custer avenue in open cut, consisting of excavation of top cut by Parson's machine and bottom cut by a Moore machine and the placing of concrete section, was continued throughout the month and progressed from station 70+12 to 77+67. The work of constructing the 5-ft.x5.75-ft. sewer in Lake street was begun on the 1st and completed on the 20th, the work consisting of excavation by

a Moore machine and placing of concrete section, and progressed from station 99+76 to station 102+40. The placing of the 18-inch tile sewer in Washington street under the C. & N. W. Ry. was continued to the 12th, the work consisting of tunnelling and placing of tile pipe with concrete backfill around same. During the month 272 lineal feet of sewer was placed.

The work on the 18-inch tile sewer in Lake street east of Sherman avenue was begun on the 19th and continued throughout the month, the work progressing from station 0 to station 1+28.

The construction of a special manhole at Davis street and Orrington avenue was begun on the 20th and continued throughout the month. An average daily force of 85 men and 0.5 teams was employed throughout the month. The work was 95 per cent complete at the end of the month.

DESPLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, contractors, resumed work on the 25th and continued throughout the month. The work consisted of excavating shaft for tunnel work on First avenue north of West 12th street. An average daily force of 16 men was employed from the 25th to 30th.

PUMPING STATIONS.

Calumet Sewage Pumping Station.

T. J. Forschner Contracting Company, contractors, continued operations throughout the month. The excavation of the sub-structure was carried on by dragline and the spoil was re-handled by a second dragline. The placing of concrete in the floor and walls of the suction chamber was carried on intermittently throughout the month. An average daily force of 45 men was employed throughout the month.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Walls.

The Sanitary District organization employed a force of 19 men operating the cement gun on the work of repairs to walls from the 1st to 15th, plastering 12,600 square feet of the west wall between Romeo and the Controlling Works with a mixture of one part cement and three parts sand. A force of 5 men was engaged from the 16th to 30th overhauling the cement gun plant and housing it for the winter.

BRIDGES.

The Sanitary District organization employed a force of men in making temporary repairs to the Romeo Road and Willow Springs Road bridges. The work of re-flooring the Summit-Lyons Road bridge was begun on the 19th and continued throughout the month.

CONTROLLING WORKS.

The bear trap dam was shut down the entire month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 25 men throughout the month cutting out disintegrating concrete and replacing same with portland cement concrete. About 190 cubic yards of concrete was replaced in the east wall just south of 16th street, Lockport.

BRIDGES.

Ninth and Sixteenth St. Bridges.

Two men were on duty on these bridges, working shifts from 7 A. M. to 3 P. M., and 3. P. M. to 11 P. M. throughout the month. A new heater was installed on the 2nd.

BUTTERFLY DAM.

This dam was operated on the 3rd, 10th and 17th. The heaters were repaired on the 18th.

DAMS AT THE POWER HOUSE.

The forty-eight foot dam was open some part of two days or a total of six hours and fifteen minutes, an average of twelve minutes for each day of the month. The twelve foot dam was shut down the entire month.

Samples of canal water were taken every eight hours for the Sanitary Division. Three men were on duty, working shifts of 8 hours each throughout the month.

I. & M. CANAL LOCK AT THE POWER HOUSE.

During the month 12 boats passed through the lock; these were locked through by the dam tender. Repairs were made to the gates. The lock circuit was cleaned of grounds on the 4th and 12th. The heater was repaired on the 25th. The motor and switch were repaired on the 30th.

DESPLAINES RIVER DIVERSION.

The Sanitary District organization employed a force of 10 men in removing trees and underbush from the bed of the Des Plaines River south of the Lyons-Summit road bridge from the 16th to 30th.

NORTH SHORE CHANNEL.

The Sanitary District organization employed a force of 11 men and one team throughout the month in filling in a culvert across Dempster street and in filling in a gully east of the channel just north of Main street.

BRIDGES.

Linden Avenue Bridge.

The Sanitary District organization employed a force of men on the work preparatory to re-flooring and painting this bridge. The bridge was closed to traffic on the 15th and the steel work was cleaned and partly painted and the timber sub-floor was nearly ready for placing the creosoted paving blocks at the end of the month.

The creosoted timber and paving blocks for the re-flooring of the bridges at Kenilworth avenue, Emerson street and Linden avenue were received, unloaded and stored.

PUMPING STATIONS.

Thirty-ninth St. Pumping Station.

The Great Lakes Dredge and Dock Company, contractors for repairing the breakwater at this station, continued operations to the 9th when all work was completed. The work done during the month consisted of delivering and placing 605.5 tons of stone as fill in the breakwater cribs. This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of two days or a total of eleven hours and thirty minutes. Pump No. 2 some part of three days or a total of eleven hours and thirty-five minutes. Pump No. 4 some part of each day or a total of seven hundred and twenty hours. The three pumps were operated for a grand average of eight hours and fifteen minutes for each day of the month and pumped an average of 6647 cubic feet of sewage for each minute of the month. Fresh water pumps Nos. 5 and 6 were shut down the entire month.

Sewage pump No. 3 was down all month for repairs. The steam turbine and generator were operated five evenings from the 13th to 18th for the Electrical Department. Painting of the steel frame work supporting the coal crane runway was continued intermittently throughout the month by a force of two painters. The gate

lift mechanism was out of service after the 18th on account of a broken bearing and beam. Repairs on same were practically completed by the end of the month. Overhauling of the steam turbine was begun on the 30th. The storing of lump coal in a pile in front of the station was completed during the month. Some 5,000 tons have been stored as a reserve supply for the winter.

Lawrence Ave. Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 2 was operated some part of twenty-four days or a total of five hundred and forty-two hours and forty-five minutes. Pump No. 3 some part of twelve days or a total of one hundred and eighty-five hours and forty minutes. The two pumps were operated for a grand average of twelve hours and eight minutes for each day of the month and pumped an average of 2540 cubic feet of sewage for each minute of the month. Sewer pump No. 1 and the fresh water pump were shut down the entire month.

Repairs to the coal conveyer and the sewage screen were completed and both were back in service on the 23rd. The storing of some 150 tons of coal as a reserve supply for the coming winter months was completed during the month.

Wilmette Pumping Station.

This station was operated, pumping fresh water throughout the month. The pumps were operated as follows: Pump No. 1 was operated some part of twenty-nine days or a total of six hundred and sixty-four hours and twenty-three minutes. Pump No. 2 some part of twenty-seven days or a total of five hundred and ninety hours and thirteen minutes. Pump No. 3 some part of thirty days or a total of six hundred and eighty-four hours and thirty-three minutes. Pump No. 4 some part of thirty days or a total of six-hundred and fifty-three hours and seventeen minutes. All of the four pumps were operated for a grand average of twenty-one hours and thirty-six minutes for each day of the month and pumped an average of 45722 cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY IMPROVEMENTS, SEWAGE AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated as usual throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at Thirty-ninth Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru, and Chillicothe. Special analyses were made on samples shipped in from Lockport. An inventory was made of the laboratory, and glassware and apparatus thoroughly inspected and cleaned.

Stock Yards Testing Station.

The dismantling of this station was continued throughout the month.

Tannery Station.

A site for this station was selected adjacent to the Monarch Leather Company on the North Branch of the Chicago River at Division Street.

Sewer and Rain Gauges.

Rain gauges were operated at the 39th Street Pumping Station, Stock Yards Testing Station, Lockport, Kensington, and at 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from the Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Drafting Division.

The work carried on during the month consisted of the following: Preparing profile of the Sag feeder and preparing negatives and maps for the Zuidema overflow case. Revising the indexing system. Compiling the Calumet-Sag atlas and the Calumet Sewer atlas was continued. Compiling the Chicago River atlas was carried on intermittently throughout the month. Writing monthly reports of the Calumet-Sag construction work and filing reports. The Chief Engineer's annual report was proofread. Indexing warehouse data. Writing monthly reports of the Engineering Department for 1918. Printing index cards and indexing maps.

Bridge Division.

Work was continued on the design and details of the reinforced concrete work for the Calumet Sewage Pumping Station. A list was made of hardware required for the re-flooring of the bridges across the North Shore Channel at Linden avenue, Emerson street, and Kenilworth. Part of the final estimate of concrete on sections 13 and 14 of the Calumet-Sag Channel was checked. Lumber was ordered for re-flooring the Main Channel bridge at Summit Road. Data was compiled for suit *in re* the Mallers Building at Jackson street bridge.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet intercepting sewer was continued. Preparation of plans for the Des Plaines River treatment works was continued. The preparation of supplementary plans for the Calumet Sewage Pumping Station was continued. The prearation of supplementary plans for the Evanston Pumping Station was begun. Studies were made of the proposed re-arrangement of the 95th Street Pumping Station. Data was prepared for officials of the United States Engineer's Office and Public Health service. A brief investigation was made of the North Branch from Chicago avenue to Diversey Boulevard together with a number of tanneries. Conferences were held with various parties from the Calumet region in Indiana over proposed schemes for sewage diversion and treatment.

Hydraulic Measurement Division.

The self-recording gages at the Main Channel at Willow Springs and Lemont and on the lake front at the U. S. Coast Guard Station were operated and periodically inspected. The records from these gages were worked up in the office.

FIELD PARTIES.

Party was employed on the following work: Chicago River dredging and docking, Union Loop Power House inspection, re-running base line and painting stations on docks North Shore Channel office and field work.

Crib repairs at the 39th Street Pumping Station. Spoil bank measurement, Section 8, Main Channel.

The Calumet-Sag field parties performed the usual routine construction duties as follows: The Sag Division on Section 1. The Blue Island Division on Section 13 and 14.

The general engineering force and

other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel section, keeping the accounts of the department, preparing vouchers, furnishing information to other departments and performing other duties, etc.

Respectfully submitted,
G. M. WISNER,
Chief Engineer.

The Clerk presented the report of the Chief Engineer for the month of December, 1918, which was ordered published and filed, as follows:

CHICAGO, January 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of December, 1918, giving the detailed operation of same:

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed no material from the spoil banks of the channel during the month. A summary of the spoil removed under this agreement is shown herewith:

	Cubic Yards
Total amount to Dec. 31, 1917, ...	477,032
Amount removed during 1918, ...	22,974
Total amount to Dec. 31, 1918, ...	500,006

CALUMET-SAG CHANNEL.

Section No. 1.

James O. Heyworth, contractor, continued operations throughout the month. Dargline No. 2 was engaged in backfilling between station 11+50 and 21+50 from the 9th to 11th, 16th to 19th and on the 23rd. Tripod drills were engaged in drilling rock in the turning basin at station 968+00, Main Channel, from the 2nd to 4th, working one 10-hour shift per day, and at station 2+50 on the 15th and 16th, working one 5-hour shift per day. Blasting rock was carried on at station 968+00 on the 12th and at station 2+50 on the 16th and 30th, working one 5-hour shift per day. Pumping channel was carried on at station 28+00, working two 12-hour shifts per day throughout the month. Concreting the turning basin wall between stations 0+50 and 6+00 was carried on throughout the month, working one 10-hour shift per day. Miscellaneous work was carried on as follows: Drilling four holes on the 2nd; excavating ditch at Archer Road on the 4th, 6th, 13th and 14th; watching dam at Archer Road on the 15th and 16th; wrecked dam at Archer Road on the 24th; cleaning ditch on the 30th and 31st. Force account work was carried on as follows: Building temporary dam at 48th avenue bridge, (Section 10) throughout the month. Pumping channel for Sections 2 to 12, inclusive, was carried on at Section 1 by the contractor, working under supplementary agreements, throughout the month. An average daily force of 62.4 men was employed. At the end of the month 97 per cent of the total estimated value of the contract was completed.

Section No. 13.

A. Guthrie & Company, contractors, carried on the following work during the month: Steam shovel No. 2 was engaged in excavating glacial drift from channel between stations 756+50 and 757+50 from the 7th to 11th and 16th to 21st, working one

10-hour shift per day. Two dinky engines and 8 dump cars were engaged in hauling spoil from steam shovel No. 2 to south berm from the 7th to 11th and 16th to 21st, working one 10-hour shift per day. An average daily force of 7 men was employed in building a foot bridge across the channel at Gregory street on the 2nd and 3rd, working one 10-hour shift per day. An average daily force of 15.7 men was employed. At the end of the month 58.4 per cent of the total estimated value of the contract was completed.

Section No. 14.

A. Guthrie & Company, contractors, carried on the following work during the month: Steam shovel No. 5 was engaged in excavating spoil from the spoil bank bank between stations 828+00 and 834+00 from the 1st to the 18th, spoil used to backfill behind north wall. Four dinky engines and 18 dump cars were engaged in hauling spoil from shovel No. 5 to backfill behind north wall between station 842+00 and 837+00, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 on the 3rd and 4th, working one 10-hour shift per day, from the 8th to 26th working one 5-hour shift per day, and at station 837+00 from the 3rd to 31st working an average of 8 hours per day. Cleaning up channel bottom by hand was carried on between stations 836+00 and 835+25 from the 5th to 9th, working one 10-hour shift per day.

BRIDGES.

C. R. I. & P. Ry. Bridge.

A. Guthrie & Company employed an average daily force of 8.5 men excavating for the north abutment of this bridge from the 1st to the 4th and 12th to 19th, working one 10-hour shift per day. On account of danger from slides during weather when work could not be continued, the excavation was sheeted, the tracks were supported and the work was suspended for the winter.

The C. R. I. & P. Ry. Company employed a force of 6 men covering 12-inch water main with burlap at the north abutment, working one 10-hour shift per day.

The Schillinger Construction Company employed an average daily force of 8.5 men building forms for and concreting floor slabs for the center track of this bridge at Lambrecht's coal yard at 123rd street in Blue Island, from the 2nd to 9th, on which date this work was completed.

Division Street Bridge.

The Kelly-Atkinson Construction Company employed an average daily force of 11.5 men placing and riveting steel for this bridge from the 2nd to the 17th, working one 8-hour shift per day.

B. & O. and G. T. W. Ry. Bridges.

The B. & O. Ry. Company employed an average daily force of 4.5 men installing interlocking system on the new B. & O. (McCook Line) diversion throughout the month.

The Strobel Steel Construction Company employed an average daily force of 3 men covering rivets and steel with tar paper on the B. & O. right of way near new bridge on the 13th and 14th, working one 8-hour shift per day.

CONTROLLING WORKS.

The Kelly-Atkinson Construction Company employed an average daily force of 7 men painting steel on the sector gates from the 2nd to the 22nd, working one 10-hour shift per day.

The Sanitary District organization employed an average daily force of 6 men building machinery house at the northeast sector gate from the 2nd

to the 18th; cleaning and oiling sector gate machinery from the 19th to 31st, working one 8-hour shift per day.

PROPOSED SPECIAL CONSTRUCTION WORK, SEWAGE DISPOSAL PLANT FOR THE NORTH BRANCH OF CHICAGO RIVER.

A brief inspection was made of the north branch by boat from Kinzie street to the north branch dam above Argyle street.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 4.

Nash Brothers, contractors, continued operations throughout the month. The work consisting of dismantling the plant and minor items such as backfilling, grading, setting electric pump at Pullman Company's intake, etc. The work was practically completed at the end of the month. An average daily force of 16 men and 2 teams was employed.

Contract Section No. 5.

Byrne Brothers Dredging and Engineering Company, resumed operations on the 20th and suspended same on the 29th. The work consisted of excavation, backfilling and placing 35 feet of the 17½-foot sewer section. An average daily force of 20 men and 2 teams was employed from the 20th to the 29th. The work was 0.7 per cent complete at the end of the month.

Contract Section No. 6.

Byrne Brothers, Dredging and Engineering Company, contractors, continued operations throughout the month. Repairs were made to the 54-inch sewer from the 1st to the 16th, when this was completed. General work of cleaning up and grading was carried on intermittently throughout the month. An average daily force of 21 men and 2 teams was employed throughout the month. The work was practically completed at the end of the month.

EVANSTON INTERCEPTING SEWER.

Nash-Dowdle Company, contractors, continued operations throughout the month. On the 4½ foot sewer, in tunnel, in Custer avenue, the work of cleaning up and removing spoil bank at the shaft was continued on the 21st, on which date the work was suspended. On the 3½-foot sewer in Custer avenue, open cut, the same was completed during the month. The work consisting of excavation of top cut with a Parsons' machine and the bottom cut by a Moore machine and the placing of the concrete sewer section. This sewer was completed from station 77+67 to 83+81, reaching the latter station on the 18th, and from station 58+34 to station 58+75 was completed on the 31st.

The work on the 18-inch and 15-inch tile sewer in Lake street, Chicago avenue, and Dempster street was continued throughout the month. The work progressing from station 1+28 to station 14+87. Excavation for the sewer was performed in part by a Parsons machine and in part by hand. The backfilling was placed by steam shovel.

The 18-inch tile sewer in Chicago avenue, from Washington street to Main street was started on the 18th and continued throughout the month. This is a continuation of the sewer placed in tunnel in Washington street under the railroad track. The work progressed from station 2+86 to station 6+48.

The 18-inch tile sewer in Cook street west of Sheridan Road was begun on the 12th and completed on the 19th, 427 lineal feet being placed. The excavation for the sewer was done by a Parsons machine.

The placing of the 24-inch tile sewer

inside the old sewer in Davis street was begun on the 5th and completed on the 27th. The work was continued from this date to the end of the month on the 18-inch sewer in the same location.

The special manhole at Davis street and Orrington avenue was completed on the 5th. Work was carried on intermittently throughout the month on manholes at various locations. The work of constructing a special manhole to serve as a pumping shaft for temporary pumping station at Lake street and Elmwood avenue was resumed on the 14th and completed on the 20th. An average daily force of 85.5 men and 5 teams was employed throughout the month. The work was 99 percent completed at the end of the month.

TEMPORARY PUMPING PLANT AT EVANSTON.

Nash-Dowdle Company, contractors, began the installation of pumps in the special manhole constructed for this purpose, on the 21st and continued preliminary operations throughout the month. Pumping service was not started during the month.

DESPLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, contractors, continued operations throughout the month. The work consisting of excavating and concreting on the 4½-foot sewer, in tunnel, in First avenue north of West 12th street. An average daily force of 50 men was employed throughout the month. The work was 2.6 per cent completed at the end of the month.

PUMPING STATIONS.

Calumet Pumping Station.

T. J. Forschner Contracting Company, contractors, continued operations throughout the month. Excavation for the substructure was carried on by dragline, the spoil being re-handled by a second dragline. The placing of concrete in the floor and walls of the section and discharge chambers was carried on intermittently throughout the month. An average daily force of 62 men was employed throughout the month. The work was about 11 per cent complete at the end of the month.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Walls.

The Sanitary District organization employed a force of 5 men at Romeo, Illinois, housing in the cement gun plant from the 1st to the 7th. The plant was transferred to 31st street and Western avenue on the 8th and a force of two men worked from the 9th to the 31st overhauling the machinery.

BRIDGES.

The Sanitary District organization employed a force of men reflooring the Summit Road bridge throughout the month. Minor repairs were made to the Lemont and Romeo Road bridges.

CONTROLLING WORKS.

The bear trap dam was open some part of three days or a total of seven hours and fifty-seven minutes, an average of fifteen minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District organization employed a force of 23 men on the work of repairs to the walls of this Channel from the 1st to the 7th, and a force of 7 men storing material and tools from the 8th to the 19th. Work was discontinued for the season on the 19th.

BRIDGES.

Ninth and Sixteenth St. Bridges.

The lamps on the 16th Street bridge were repaired on the 29th. Two men were on duty on the bridges, working from 7 A. M. to 3 P. M., and from 3 P. M. to 11 P. M. throughout the month. Each man caring for both bridges.

BUTTERFLY DAM.

This dam was not operated during the month. Heater was installed on the 4th. Fuses were made for the Controlling Works on the 14th.

DAMS AT THE POWER HOUSE.

The forty-eight foot dam was open some part of four days or a total of eighteen hours and fifty-five minutes, an average of thirty-six minutes for each day of the month. The twelve foot dam was shut down the entire month. The dam house circuit was repaired on the 22nd. Samples of canal water were taken every 8 hours for the Sanitary Division. Three men were on duty, working shifts of 8 hours each throughout the month.

I. & M. CANAL LOCK AT THE POWER HOUSE.

No boats passed through the lock during the month. The heater was repaired on the 7th. No one was on duty during the month.

DESPLAINES RIVER DIVERSION.

The Sanitary District organization employed a force of 9 men removing trees and underbrush from the bed of this channel south of the Lyons-Summit Road bridge. This work was completed at the end of the month.

NORTH SHORE CHANNEL.

The Sanitary District organization employed a force of seven men and one team on the work of repairs to outfalls and ditches along this channel, working from the 1st to 11th cleaning out the ditch east of the channel on the north side of Devon avenue.

BRIDGES.

Linden Avenue Bridge.

The Sanitary District organization force completed the painting and re-flooring of this bridge. The creosoted paving blocks were laid by the James A. Sackley Co. A few yards of brick pavement at each end of the bridge were taken up and relaid on account of the change in the grade of the bridge.

Hill Street Bridge.

The Sanitary District organization force was engaged in painting this bridge and made minor repairs to the sidewalks and roadway floor.

Peterson Avenue Bridge.

A small amount of asphalt pavement at each end of this bridge was removed and replaced with brick pavement to bring the same up to the grade of the bridge.

Minor repairs were made to the following bridges: Devon avenue, Kenilworth avenue, Foster avenue, Main and Dempster streets.

A temporary walk was laid along the east side of the channel from Linden avenue to Laurel street.

PUMPING STATIONS.

Thirty-ninth St. Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of thirteen days or a total of one hundred and twenty-six hours and thirty minutes. Pump No. 2 some part of ten days or a total of one hundred and sixteen hours and fifty-five minutes. Pump No. 4 some part of twenty-eight days or a total of five

hundred and sixty-five hours and thirty-five minutes. The three pumps were operated for a grand average of eight hours and forty-two minutes for each day of the month and pumped an average of 8248 cubic feet of sewage for each minute of the month. Fresh water pumps Nos. 5 and 6 were shut down the entire month.

Sewer pump No. 3 was down all the month for repairs. The thrust bearing on sewage pump No. 2 became overheated on the 9th and this pump was out of service for one week while repairs were being made to the bearing. Repairs on the gate lift mechanism, which was out of service after November 18th on account of a broken bearing and beam, were completed on the 11th. Overhauling of the steam turbine, which was begun on November 30th, was practically completed on the 7th, but work was done on it intermittently until the end of the month. Repairs to the track scales were begun on the 27th and continued through the month.

Lawrence Ave. Pumping Station.

This station was operated, pumping sewage and fresh water, throughout the month. The pumps were operated as follows:

Sewer pump No. 2 was operated some part of twenty-four days or a total of five hundred and twenty-seven hours and fifteen minutes. Pump No. 3 some part of eleven days or a total of two hundred and ten hours and twenty minutes. The two pumps were operated for a grand average of eleven hours and fifty-four minutes for each day of the month and pumped an average of 2297 cubic feet of sewage for each minute of the month. Sewer pump No. 1 and the fresh water pump were shut down the entire month.

The house pump and the two circulating pumps for the condensers were overhauled during the first part of the month. Repairs were made on sewage pump No. 3.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The pumps were operated as follows:

Pump No. 1 was operated some part of twenty-eight days or a total of six hundred and twenty-three hours and seventeen minutes. Pump No. 2 some part of fifteen days or a total of three hundred and ten hours and thirty-eight minutes. Pump No. 3 some part of twenty-eight days or a total of six hundred and four hours and thirty-three minutes. Pump No. 4 some part of nineteen days or a total of three hundred and seventy-eight hours and thirty-six minutes. All of the four pumps were operated for a grand average of fifteen hours and twenty-eight minutes for each day of the month, and pumped an average of 32962 cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at Thirty-ninth Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru, and Chillicothe. Special analyses were made on samples shipped in from Lockport.

Stock Yards Testing Station.

The dismantling of this station was continued throughout the month.

Sewer and Rain Gauges.

Rain gages were operated at the 39th Street pumping station, Stock

Yards testing station, Lockport, Kensington, and at 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from the Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru, and Chillicothe.

ENGINEERING DEPARTMENT.

Drafting Division.

The following work was carried on during the month: Compiling the Calumet-Sag atlas. The work on the Calumet sewer atlas was completed. Indexing and filing maps and plans. Work on the Chicago River atlas was continued intermittently throughout the month. Reading proof on the 1917 annual report of the Engineering Department. Printing index cards. Work was started on the plotting of the permanent map of the Stock Yards District. Writing monthly reports on the Calumet-Sag construction and filing reports. Inspecting rip-rap on Section 11 of the Calumet-Sag Channel. Looking up permits for the Heldmaier Dock on the South Branch of the Chicago River. Writing monthly reports of the Engineering Department. Copying records at the City Hall for the North Branch Waste Investigation. Indexing data at warehouse. Indexing field books. Checking tabulation of Calumet-Sag right of way for tax investigation. A new "Order of Business" card was made for the Board Room. Checking tabulations of the Main Channel right of way for the Real Estate Department. Checking tabulations of the North Shore Channel real estate for the Real Estate Department and copying records for same at the City Hall and County Building for same purpose. Revising index system.

Sanitary Division.

The following work was carried on: The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet intercepting sewer was continued. Conferences were held with officials of the City of Chicago. The preparation of plans of the Des Plaines River treatment works was continued and the preparation of specifications for the same was begun. The preparation of supplementary plans for the Calumet and Evanston sewage pumping stations were continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed rearrangement of the 95th Street Pumping Station. Conferences were held with various parties from the Calumet region in Indiana over proposed schemes for sewage diversion and treatment. An exhibit was prepared for the annual convention of the American Public Health Association at the Hotel Morrison. The two meetings of the Sanitary Engineering Sessions were attended. A brief report was prepared. Statistics were compiled on sewage treatment in the United States.

Hydraulic Measurement Division.

The self-recording gages on the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records obtained from these gages were worked up in the office.

Bridge Division.

The following work was carried on during the month: Checking detail

drawings for the structural steel work; designing and detailing reinforcing for concrete walls and floors and investigation of different designs for sluice gates for the Calumet sewage pumping station. A report of conditions existing during the construction of the Jackson Street bridge was made for the Law Department for use in defending the damage suit brought by the owners of the Mallers Building.

Channel Maintenance Division.

Party was employed on Chicago River dredging and docking, re-running base line and painting stations on docks; North Shore Channel sloping, office and field work; Main Channel Section No. 7 right of way survey; setting gage at Willow Springs on the Des Plaines River; Proposed survey of the North Branch of the Chicago River; office work on reports.

The Calumet-Sag Channel field parties performed the usual routine construction duties as follows: The Sag Division on Section 1 and the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections; keeping the accounts of the department, preparing vouchers, furnishing information for other departments and performing other necessary duties, etc.

Respectfully submitted,
G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that in accordance with the terms of a contract dated May 17, 1917 (page 774 of the Proceedings), between The Schillinger Construction Company and the Sanitary District for the construction and delivery of concrete floor slabs for the Chicago, Rock Island & Pacific main line bridge, and for the C. R. I. & P. and B. & O. C. T. connecting track bridge across the Calumet Sag Channel of the Sanitary District in the City of Blue Island, the Sanitary District has retained from time to time, as a reserve percentage, 10 per cent of the sums due for furnishing said slabs for bridges designated as Nos. 1 and 3, which amounts to $850.75, which sum cannot be paid said Contractor until the slabs for all of the bridges covered by said contract have been delivered.

Your Committee further reports that said Contractor has requested that it be paid said sum of $850.75, and the Chief Engineer has recommended that said request be granted inasmuch as a large part of said contract is completed.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby, authorized and directed to pay upon the voucher of the Chief Engineer to The Schillinger Construction Company the sum of $850.75 above referred to, upon the execution by an officer of said Company of an affidavit that all materialmen, mechanics and workmen employed by said Contractor under said contract in the work of furnishing the concrete slabs for said bridges Nos. 1 and 3 have been paid in full; and also

upon said Contractor furnishing the Sanitary District with a consent in writing by the surety on its bond that said payment may be made, said payment, however, to be made subject to any unaccrued obligation imposed by said contract.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Lawley, Littler, Mueller, Nance and Paullin—Six.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance herewith transmits bills for special assessments levied against certain real estate of the Sanitary District therein described, situated in the City of Joliet, Will County, Illinois, to-wit:

Special assessment for constructing sewer in McDonough street	$316.84
Interest thereon from August 5, 1918, to January 31, 1919	7.78
Special assessment for paving McDonough street	3,887.88
Interest thereon from August 5, 1918, to January 31, 1919	95.04
Special assessment for paving Jackson street	260.40
Interest thereon from January 2, 1918, to January 31, 1919	14.07
Total	$4,582.01

Your Committee further reports that it has examined said bills, and in its opinion same are correct and should be paid to the City Collector of the City of Joliet, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby, authorized and directed to draw a warrant in the sum of $4,582.01 payable to J. F. Parson, City Collector of the City of Joliet, and deliver the same to him in full payment of said special assessments.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance herewith transmits to the Board grant of easement whereby Charles E. Stannard and Ora Stannard, his wife, for the nominal consideration of $1.00 grant to The Sanitary District of Chicago a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer, with appurtenances thereto, in the Des Plaines River Dis-

trict in, under and through certain real estate owned by said parties. Said grant of easement permits the Sanitary District to transport material, equipment, excavated soil and debris over and across said property. The Sanitary District agrees to provide two twelve-inch connections in said sewer for drainage purposes and other connections for sewage purposes, which may be approved by the Chief Engineer. Otherwise the grant of easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement, which has been approved by the Chief Engineer and Attorney, and, therefore, recommends the passage of the following order.

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby, authorized and directed to execute in duplicate said form of easement which is hereto attached, same having been duly executed by said grantors.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, January 30, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of January payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of January, 1919.

John McGillen, Clerk (general roll for last half of January)	$ 26,894.58

Construction Account.

T. J. Forschner Contracting Company (work on Calumet sewage pumping station)	$ 22,371.98	
Nash Bros. (Contract No. 1, Desplaines river intercepting sewer)	19,275.99	
James O. Heyworth (Section 1, Calumet-Sag Channel)	2,607.50	
H. Channon Company (jacks and bars)	33.48	
John Korte (coal)	18.10	
Keuffel & Esser Company (supplies)	9.28	
Kirby Motor Trucking Company (moving equipment, Stockyards testing station)	7.00	
John Korte (one ton nut coal)	6.30	
Schreiber Bros. (supplies)	5.72	
Burr-Vack Company (diaries)	4.94	
Public Service Company of Northern Illinois (gas service)	3.97	
Commonwealth Edison Company (light service)	1.55	
		44,345.81
Amount carried forward		$ 71,240.39

Amount brought forward		$ 71,240.39
Maintenance and Operation Account.		
John McGillen, Clerk (special roll, 39th street pumping station)	$ 338.00	
John McGillen, Clerk (special roll, Lawrence avenue pumping station)	104.50	
John McGillen, Clerk (freight charges paid P. C. C. & St. L. R. R. hauling fuel for Lawrence avenue pumping station)	70.99	
John McGillen, Clerk (freight charges paid C. & A. hauling fuel for Lawrence avenue pumping station)	64.61	
John McGillen, Clerk (freight charges paid C. M. & St. P. R. R. hauling machinery to 39th street pumping station)	30.60	
Edwards & Bradford Lumber Company (coal)	1,446.39	
Producers Material Company (gravel and sand)	412.43	
Richards, Evans & Co. (coal)	204.57	
George Irmiter (teaming)	53.00	
City Collector, City of Chicago (inspection services)	157.28	
Wm. O'Connell (supplies)	128.21	
Lynch-Clarisey Company (boiler compound)	84.38	
Trumbull Waste Mfg. Company (white cotton waste)	36.25	
Stebbins Hardware Company (bolts)	33.12	
North Shore Hardware Company (materials)	27.40	
Theo. B. Robertson Products Company (soap powder)	26.28	
Wilbur J. Connell (reinforced scoops)	24.00	
Thirty-ninth St. Motor Express (cartage charges)	20.00	
Burr-Vack Company (Perfection pads, etc.)	19.28	
The Carl Anderson Company (labor and material)	16.50	
Karsten & Muller (team service)	13.50	
Chicago Feather Duster Company (six floor brushes and handles)	9.00	
L. Gould & Co. (toilet paper)	8.50	
Geo. L. Hammons (Stillson wrenches and 12 spouts)	8.25	
John Bigane & Sons (ton of coal)	6.55	
Jas. B. Campbell & Co. (supplies)	6.10	
Standard Oil Company (labor and material)	2.16	
Bissell Laundry (towel service)	1.54	
		3,353.39
Law Department.		
Cunningham Motor Livery (storage charges)	$ 8.00	
S. & L. Motor Company (repairing car)	2.45	
		10.45
Clerical Department.		
Mead & Wheeler Company (transfer cases, etc.)	$ 48.60	
Underwood Typewriter Company (repairing machine)	22.50	
Burr-Vack Company (rubber sponge and cup, etc.)	1.95	
		73.05
Treasury Department.		
Cameron, Amberg & Co. (leaf register of clerks)		47.00
Police Department.		
Lawrence Kirk (hay, oats and straw)	$ 15.05	
Overland Motor Company (axle, etc.)	10.12	
		25.17
General Account.		
Fred Klein Company (printing Proceedings)		95.00
Amount carried forward		$ 74,844.45

Amount brought forward.....$ 74,844.45

Electrical Department.

Commonwealth Edison Company (electricity furnished Sanitary District during the month of December, 1918, as per contract)	$ 6,596.46	
John McGillen, Clerk (weekly payroll)	320.40	
John McGillen, Clerk (expenses of employe)	14.65	
John McGillen, Clerk (expenses of employe)	4.67	
General Electric Company (integrating wattmeter, etc.)	411.14	
Commonwealth Edison Company (insulators)	190.68	
Rhodes Metallic Packing Company (packing)	141.12	
The Fred J. Ringley Company (printing)	127.20	
Wm. Heggie (pipe, bolts and gaskets)	111.00	
John Wohlgemuth (teaming)	75.00	
Burr-Vack Company (yellow pads, etc.)	69.77	
Delta Star Electric Company (disconnecting switches)	56.10	
Henry Stuckart (nails, bolts, etc.)	40.85	
The Electric Auto Lite Service Station (generator)	25.50	
H. Channon Company (suction hose, etc.)	31.93	
Wilbur J. Connell (monkey wrenches)	24.00	
E. J. Brooks & Co. (wire)	23.16	
Bentley, Murray & Co. (description sheets)	20.75	
Monarch Electric & Wire Company (terminal lugs and lamp cord)	18.35	
Central Electric Company (pet and primary cocks, etc.)	18.24	
Wadsworth-Howland Company (metal polish)	16.32	
Parker's Towel Supply Company (towel service)	12.25	
H. M. Hooker Glass & Paint Company (boiled oil)	10.30	
Buchanan-Daley Company (clear ash rough)	10.24	
Bearings Service Company (bearing)	10.00	
Stebbins Hardware Company (hex nuts)	9.01	
L. Gould & Co. (toilet paper)	8.90	
The White Company (reflex porcelains)	8.72	
International Harvester Company of America (disc clutch thrust bearing housing, etc.)	8.24	
Continental & Commercial Safe Deposit Company (steel cable)	8.00	
Northern Metal Company (lead)	7.50	
Henry Stuckart (hex tap nuts)	6.75	
The Essenkay Products Company (change covers)	6.00	
Sangamon Electric Company (potential coils)	3.92	
Triple Action Spring Company (grease cup bolts)	2.70	
Overland Motor Company (tail lamp, etc.)	2.65	
Henry M. Joda (galvanized iron)	2.25	
Henry Stuckart (galvanized nails)	2.25	
		8,456.97

Miscellaneous Accounts.

Edmund D. Adcock, Attorney (cash box account of Law Department)—			
Construction Account	$ 1.50		
Law Department	48.21		
		$ 49.71	
Western Union Telegraph Company (clock service)—			
Clerical Department	$ 3.00		
General Account	3.00		
		6.00	
Parker's Towel Supply Company (towel service)—			
Construction Account	$ 2.50		
Amounts carried forward		$ 55.71	$ 83,301.42

Amounts brought forward		$ 55.71	$ 83,301.42
Maintenance and Operation Account	1.00		
		3.50	
John McGillen, Clerk (payroll Stockyards Testing Station)—			
Construction Account	$ 108.80		
Maintenance and Operation Account	28.00		
		136.80	
			195.01
Grand Total			$ 83,497.43

Respectfully submitted,
JAS. H. LAWLEY,
Chairman
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the following report be adopted and that vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance (*except as to voucher to the Commonwealth Edison Company, for electricity furnished the Sanitary District during the month of December, 1918, as per contract, for $6,596.46, on which Mr. Nance voted "nay"*), and Paullin—Seven.

Nays—None (*except as above stated*).

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents a contract for renewal with Fred Siegel, 46th avenue and West 12th street, wherein he agrees to take and the Sanitary District agrees to furnish electrical energy for temporary service upon the terms and conditions therein set forth. Said contract has been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk, be, and they are hereby, authorized and directed to execute in duplicate the attached contract, which has been properly executed by said Fred Siegel.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that The Sanitary District of Chicago entered into a contract with the Star Cereal Company to furnish said Company with electrical energy at its new building, located at Western and Austin avenues. That at the time said contract was entered into, the consumer requested that power be transmitted to it as quickly as possible, and the Sanitary District was ready to supply said power on December 4, 1918, but owing to the incompletion of said building the consumer was unable to utilize said power.

Under the terms of said contract, the consumer agreed to pay $334.00 per month, and the minimum charge for the period from December 4, 1918, to December 31, 1918, is $312.45. The Electrical Engineer states that the consumer was billed for said amount for the month of December, 1918, and has requested that said amount be remitted for the reason that the building was not finished, and, therefore, said power could not be utilized.

The Electrical Engineer further states that said contract provides for an extension of time of six months beyond the date of the beginning of said contract by either party giving written notice to the other that the service could not be supplied or used at the time specified in the contract, but that no such written notice was given to the Sanitary District by the consumer that it would be unable to use the power at the time contemplated.

Your Committee, having considered the matter, is of the opinion that under the facts in the case the charge of $312.45 for the month of December, 1918, should be remitted, and, therefore, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby, authorized and directed to cancel and remit the charge of $312.45 against the Star Cereal Company above referred to; and that the amounts due the Sanitary District for electrical energy supplied to said Company be determined from and after January 4, 1919, the date on which the service connection was actually completed.

Respectfully submitted,

H. E. LITTLER,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Nance and Paullin—Six.

Nays—None.

Employment.

Mr. Lawley presented the following report from the Committee on Employment:

CHICAGO, January 30, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Employment reports that it has received the resignation of Mr. Edward Keeley, Manager of the Real Estate Department of The Sanitary District of Chicago, which is herewith transmitted to the Board.

Your Committee further reports that inasmuch as Mr. Keeley is desirous of severing his connection with The Sanitary District of Chicago that the resignation be accepted to take effect January 31st, 1919.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
H. E. LITTLER,
Committee on Employment.

Mr. Lawley moved that the report be adopted and that the resignation of Mr. Edward Keeley, Manager of the Real Estate Department, be accepted.

The motion prevailed.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Lawley presented the following ordinance:

Be it Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That the Treasurer of The Sanitary District of Chicago be, and he is hereby, authorized and directed to pay to the several officers and employes of The Sanitary District of Chicago as salaries and compensation for the month of January, 1919, the amount per month authorized to be paid for the fiscal year ending December 31, 1918, subject, however, to such changes as may be made in said salaries and compensation by the general appropriation ordinance for the fiscal year 1919; and subject also to such reductions unqualified or contingent as may be made in said salaries and compensation by said general appropriation ordinance. All reductions which shall be made by said general appropriation ordinance which are not deducted as required by said general appropriation ordinance from said salaries and compensation for the month of January, 1919, shall be charged against the salaries or compensation of the respective persons for the month of February, 1919.

The heads of the several departments of The Sanitary District of Chicago are also hereby authorized and empowered to incur the necessary expenses for the month of January, 1919, on such requisitions as may be approved by the Committee on Finance, and the Treasurer of The Sanitary District of Chicago is further authorized and directed to pay for such necessary current expenses so approved.

SECTION 2. This ordinance shall be in force and effect from and after its passage.

Mr. Lawley moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healey, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillson,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, FEBRUARY 6, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Clark—One.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meeting of January 30, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The President presented the following message:

CHICAGO, February 6, 1919.

To the Honorable, the Board of Trustees, Sanitary District of Chicago.

GENTLEMEN—On last Friday afternoon, January 31, I received the following communication from the Chairman of the Committee on Finance of the City Council of the City of Chicago.

Hon. Charles H. Sergel,
President, Sanitary District,
900 South Michigan Ave., City.

Dear Sir:

In accordance with a notice heretofore sent you by the City Clerk

notifying you that you have been appointed by the Chicago City Council as a member of the Committee to give consideration to the subject of employment during the period of transition from a war to a peace basis and to outline a plan of action and co-operation for submission to Federal, State and local taxing bodies, with a view to arrange for an early prosecution of public works and encouragement to private construction work, I beg to inform you that there will be a meeting of this committee held in the Finance Committee room, 3rd floor, City Hall, Chicago, on Saturday February 1, at 11 o'clock A. M., for the purpose of organizing.

Yours very truly,
JOHN A. RICHERT,
Chairman, Committe on Finance.

The communication from the City Clerk mentioned by Mr. Richert, enclosed the order of the City Council providing for the organization of the Committee and was received by me on Friday morning. There being no meeting of the Board scheduled until today at which action could be taken on the communication, I appointed Trustee Harry E. Litt'er, to represent the Sanitary District at the meeting, and he accepted the appointment. I ask your concurrence in my action.

Very truly,
CHARLES H. SERGEL,
President the Sanitary District.

Mr. Nance moved that the action of the President in appointing Trustee Harry E. Littler be concurred in.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 6, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance in accordance with Rule 46 of the Rules and Regulations of the Board herewith presents weekly reports made to your Committee by the Clerk of all purchases made by him for and on account of the Sanitary District of Chicago from November 4, to December 28, 1918, inclusive.

Your Committee further reports that it has examined said reports, found them to be correct, has approved same and recommends that they be accepted and placed on file.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman,
WILLIS O. NANCE,
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be received and placed on file.

The motion prevailed.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 6, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of February payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

Jas. O. Heyworth (labor and material, Sections 4 to 12, Calumet-Sag Channel)	$ 2,000.00
Amount carried forward	$ 2,000.00

Amount brought forward	$ 2,000.00	
Jas. O. Heyworth (labor and material operating pumping plant)	550.00	
Jas. O. Heyworth (labor and material operating pumping plant)	475.00	
John F. Klein (teaming)	72.00	
John Bigane & Sons (coal)	37.95	
McCallum & Clark (rent)	25.00	
Orrin Eames (rent)	20.00	
C. E. Reading (coal)	13.40	
Augusta Rau Schwarz (rent)	12.00	
Schreiber Bros. (supplies)	11 85	
Josephine Eck (rent)	8.00	
Nash Bros. (labor and material)	84.08	
A. Guthrie & Co. (labor and material)	67.48	
		$ 3,376.76

Maintenance and Operation Account.

John McGillen, Clerk (special roll, repairs to Controlling Works, Main Channel and Main Channel bridges)	$ 377.00	
John McGillen, Clerk (special roll, repairs to pumps, Wilmette Pumping Station and repairs to North Shore Channel bridges)	150 00	
John McGillen, Clerk (freight charges paid I. C. R. R. hauling fuel to 39th St. Pumping Station)	1,031.10	
John McGillen, Clerk (freight charges paid C. B. & Q. R. R. hauling fuel to Lawrence Ave. Pumping Station)	165 29	
Sterling Midland Coal Company (coal)	664.59	
H. Frenzel (teaming)	340.28	
John J. Alguire (personal injuries)	75.00	
Sullivan Oil Company (cylinder oil)	65.78	
Weil Bros. (gate valve and fittings)	52.60	
C. H. Nordell (labor and material)	35.00	
Geo. L. Hammons, Inc. (repair parts)	10.77	
Edwards & Bradford Lumber Company (freight charges on fuel)	6.15	
The Fixet Windshield Company (repair lamp and two lenses)	5.50	
Parker's Towel Supply Company (towel service)	5.00	
Kirby Motor Trucking Company (cartage charges)	4.00	
		2,948.06

I. & M. Canal and Illinois River Conditions Department.

Chillicothe Hardware Company (window glass, etc.)	$ 7.90	
Public Service Company of Northern Illinois (water service)	6.28	
W. H. Ratcliff (manure)	2.25	
		16.43

Law Department.

Louis H. Piepenbrink, Clerk of Circuit Court, Will County, (court costs)	$ 44.05	
Chas. G. Sachse (professional services rendered)	37 50	
Law Bulletin Publishing Company (subscription)	27.00	
A. B. Dick Company (stencil paper, etc.)	20.25	
West Publishing Company (subscription)	7.50	
Callaghan & Co. (Roses' Notes, Vol. No. 12)	7.50	
John McGillen, Clerk (fund advanced for state license)	6.00	
Robert S. Leete & Co. (note books)	3.75	
Callaghan & Co. (Illinois Appellate Reports)	1 65	
		155.20

Amount carried forward $ 6,496.45

Amount brought forward		$ 6,496.45
Clerical Department.		
John McGillen, Clerk (expenses of employes)		9.28
Police Department.		
John McGillen, Clerk (expenses of employe)		1.85
Electrical Department.		
John McGillen, Clerk (semi-monthly roll, last half of January, 1919)	$ 15,160.22	
John McGillen, Clerk (expenses of employes)	471.99	
John McGillen, Clerk (fees paid for state licenses)	98.00	
John McGillen, Clerk (freight charges paid P. R. R. on lightning arresters)	9.88	
John McGillen, Clerk (storage charges paid N. Y. C. R. R. on faultless anchors)	.26	
Worthington Pump & Machinery Company (air extractor, complete, etc.)	410.00	
Monarch Electric & Wire Company (solid wire)	409.92	
Pottinger-Flynn Coal Company (coal)	391.88	
United States Aluminum Company (cable)	372.01	
Rhodes Metallic Packing Company (packing)	338.69	
Naugle Pole & Tie Company (cedar poles)	283.45	
The Texas Company (oil)	218.03	
National Carbon Company, Inc. (brushes)	146.16	
Weil Bros. (stop cocks, etc.)	138.62	
Wm. H. Reid Company (cylinder oil)	132.64	
Carey G. Wirick & Co. (arrow grip clamps, etc.)	130.55	
Geo. B. Carpenter & Co. (jute rope)	107.09	
Conroy Boiler & Tank Works (bolts with two hexagon nuts, etc.)	104.47	
Rhodes Metallic Packing Company (sets of packing)	102.31	
Monarch Electric & Wire Company (fuses, wire, etc.)	96.40	
Wilbur J. Connell (padlocks with chains, etc.)	91.65	
The Faultless Anchor & Mfg. Company (Faultless guy anchors)	85.80	
Belden Mfg. Company (wire)	84.94	
G. & W. Electric Specialty Company (potheads, tubes)	82.50	
John Bigane & Sons (coal)	66.41	
Chicago Fire Brick Company (O. K. Crown squares, etc.)	65.17	
Monarch Electric & Wire Company (paraffin pins)	58.80	
American Supply Company (sanitary wipers)	58.08	
L. L. Fleig & Co., Inc. (bias yarn tape)	53.75	
Aurilla Scully (compensation for death of Arthur Scully)	50.00	
Steele-Wedeles Company (supplies)	48.37	
The Lord & Bushnell Company (lumber)	46.30	
Western Electric Company (black conduit)	39.65	
National Lead Company (lead pipe and sleeving)	35.24	
Barrett Hardware Company (machine bolts, etc.)	34.11	
Patrick Brennan (personal injuries)	30.00	
The Berkshire Company (kraft bags)	26.77	
Geo. L. Hammons, Inc. (tubular lanterns with globes)	26.04	
G. J. Cushing (personal injuries)	26.00	
R. Hanisch Sons Company (weed chains, etc.)	25.05	
Willard Storage Battery Company (new battery part)	23.77	
American Gear Company (ring and pinion gear)	23.75	
Schweitzer & Conrad, Inc. (fuses)	19.30	
The Dalton Adding Machine Company (repairing machine)	18.00	
Consumers Company (ice)	17.72	
Amounts carried forward	$ 20,259.74	$ 6,496.45

Amounts brought forward	$ 20,259.74	$ 6,496.45
David G. Murray (teaming)	16.00	
Buchanan-Daley Company (coal)	15.00	
American Supply Company (sanitary wipers)	14.87	
R. Hanisch Sons Company (Champion reg. plugs)	14.73	
The Wm. H. Reid Company (engine oil)	14.35	
Overland Motor Company (clutch rollers, etc.)	13.24	
J. A. Johnson (personal injuries)	13.00	
L. Gould & Co. (Star mops, etc.)	12.05	
Central Electric Company (cartridge fuses)	11.76	
McFarland & Hyde Company (galvanized iron)	11 10	
Geo. L. Hammons, Inc. (gauge glasses, etc.)	10.20	
Stebbins Hardware Company (auto locks, etc.)	10 05	
Joliet Transfer Company (hauling charges)	10.00	
Lockwood & Strickland Company (lumber)	9.50	
Brodin Pattern & Supply Company (pattern for collecting ring)	8 82	
E. H. Sargent & Co. (heavy test tubes)	8.28	
Shavings & Sawdust Company (sawdust)	6 50	
C. Hacker Company (poles)	6 00	
Cottage Grove Mfg. Company (birch strips)	6.00	
Eureka Dri-Kure Tire Retreading Company (magic rubber mend)	6.00	
Metropolitan Glass Company (glass)	5.90	
The C. H. Hanson Company (stencil letters, etc.)	5.59	
United States Crushed Stone Company (telephone calls)	5.20	
Joliet Motor Company (one windshield)	4.75	
The Beckley Ralston Company (shackle bolts)	2.70	
Exide Battery Depots, Inc. (glass jars)	2.06	
S. E. McKee (over-payment on bills)	1.60	
Fuller-Morrison Company (petrolatum)	1.37	
United States Crushed Stone Company (telephone calls)	1.30	
City Collector, City of Chicago (inspection charges)	1.00	
Addressograph Company (plates and cards)	.86	
R. Hanisch Sons Company (1-piece Stagg back letters, 25 lbs., less credit of $21.25)	.40	
		20,509.92

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ .95		
Clerical Department	57.24		
General Account	2.40		
Electrical Department	5.70		
		$ 66.29	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 106.36		
Maintenance and Operation Account	11.95		
Law Department	4.09		
		122.40	
Hinckley & Schmitt, Inc. (drinking water)—			
Construction Account	$ 7.10		
Maintenance and Operation Account	17.00		
		24.10	
John McGillen, Clerk (payroll repairs to walls, Main Channel and Stockyards Testing Station)—			
Construction Account	$ 30.00		
Maintenance and Operation Account	222.00		
		252.00	
			464.79
Grand Total			$ 27,471.16

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
GEORGE W. PAULLIN,
Commitee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley requested unanimous consent to defer action on other matters of the Committee on Finance until the reports of all other Committees had been presented to the Board.

There being no objection, it was so ordered.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, February 6, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken upon recommendation of the heads of the various departments, effective January 1, 1919:

	Per Month From	To
BOARD OF TRUSTEES—		
Increases—		
William B. Foley, Secretary to the President	$250.00	$291.67
DEPARTMENT OF THE CLERK OF THE DISTRICT—		
Increases—		
G. A. Kelly, Budget Bookkeeper	150.00	200.00
Jessie W. Shantz, Counter Clerk	130.00	175.00
Elizabeth Miller, Vault Clerk	120.00	150.00
New Appointment—Position Created—		
Daniel Huguenin, Superintendent of Efficiency (Transferred from Fund of the Committee on Finance.)	225.00	
DEPARTMENT OF LAW—		
Increases—		
Charles E. Anthony, Assistant Attorney	500.00	541.67
Walter E. Beebe, Illinois Valley Attorney	441.67	500.00
H. G. Immenhausen, Assistant Attorney	225.00	250.00
New Appointment—Position Created—		
Mrs. M. V. Gottschalk, Stenographer	125.00	

	Per Month From	To
Title of Position Changed—		
J. Walter Nielsen, Investigator to Docket Clerk.....	125.00	
Position Abolished—		
Position of one Assistant Attorney.....	400.00	
DEPARTMENT OF POLICE—		
Increases—		
James Haggerty, Sergeant.....	125.00	135.00
Emil Wanderer, Sergeant.....	125.00	135.00
Joseph Kennefick, Sergeant.....	125.00	135.00
Lawrence Carroll, Patrolman.....	115.00	125.00
Fred W. Schuett, Patrolman.....	115.00	125.00
Edward Morrissey, Patrolman.....	115.00	125.00
Emil Klank, Patrolman.....	115.00	125.00
Tony Alessi, Patrolman.....	115.00	125.00
John Conlin, Patrolman.....	115.00	125.00
William Wittlieb, Patrolman.....	115.00	125.00
William Frodin, Patrolman.....	115.00	125.00
Thos. F. Lesinak, Patrolman.....	115.00	125.00
William Sweitzer, Patrolman.....	115.00	125.00
Frank J. Schmidt, Jr., Patrolman.....	115.00	125.00
Hilmer Holm, Patrolman.....	115.00	125.00
George W. McPherson, Patrolman.....	115.00	125.00
Adolph Sundmacher, Patrolman.....	115.00	125.00
Herman F. Heinecke, Patrolman.....	115.00	125.00
John E. Pierce, Patrolman.....	115.00	125.00
James Mooney, Patrolman.....	115.00	125.00
Jos. P. Kruppa, Patrolman.....	115.00	125.00
Wm. L. Koerner, Patrolman (Feb. 1, 1919).....	115.00	125.00
Chas. A. Ison, Patrolman (Feb. 1, 1919).....	115.00	125.00
Edw. A. Wendt, Patrolman (Feb. 1, 1919).....	115.00	125.00
Chas. R. Fross, Patrolman (Feb. 1, 1919).....	100.00	115.00
Michael Conway, Patrolman (Feb. 15, 1919).....	100.00	115.00
Reinstated—		
James Hughes, Patrolman (Feb. 3, 1919).....	125.00	
Sergeants—To receive $135.00 per month. No Patrolman eligible to be a Sergeant except after one and one-half years' service in the Police Department of the Sanitary District.		
Patrolmen—For the first six months' service, $100.00 per month. For the next year's service, $115.00 per month. After eighteen months of service, $125.00 per month.		
Dropped from Service—Positions Abolished—		
Daniel D. Curtin, Patrolman.....	115.00	
John J. Burke, Patrolman.....	115.00	
Richard Dooley, Patrolman.....	115.00	

	Per Month From	To
Frank Timoney, Patrolman	115 00	
Herman Tabbert, Patrolman	115.00	
Patrick H. Leahy, Patrolman	115.00	
A. J. McVady, Patrolman	115.00	
Dennis McCaffrey, Patrolman	115.00	
Michael Plunkett, Patrolman	115.00	
Frank Uczciwek, Patrolman	115.00	
Peter Trens, Patrolman	115.00	
Henry D. Lynch, Patrolman	100.00	
DEPARTMENT OF THE ILLINOIS & MICHIGAN CANAL & ILLINOIS RIVER CONDITIONS—		
Increases—		
E. H. Heilbron, Illinois Valley Engineer	500.00	550.00
D. H. Dugan, Assistant Engineer	250 00	300.00
W. J. Powers, Sub-Assistant Engineer	175.00	200.00
O. W. Boers, Draftsman to Sub-Assistant Engineer.	175.00	200.00
H. T. Burkitt, Instrument Man	145.00	160.00
W. T. McCanna, Draftsman	120.00	130.00
Twenty-three Gauge Readers	5.00	each 6.00
Three Gauge Readers	10.00	each 11.00
Four Gauge Readers	6.00	each 7 00
Titles of Positions Changed—		
L. H. Welcome, Computor to Rodman	115.00	
John Markham, Campman to Watchman	100 00	
Positions Abolished.		
Position of One Launch Engineer	100.00	
Position of One Rodman	100.00	
Position of One Watchman	75.00	
DEPARTMENT OF ENGINEERING—		
Increases—		
Langdon Pearse, Division Engineer to Sanitary Engineer	500 00	550.00
H. P. Ramey, Division Engineer	375.00	416.67
Philip Harrington, Division Engineer	375.00	416.67
Ralph Burke, Division Engineer	375.00	416.67
S. T. Smetters, Assistant Bridge Engineer	275.00	333.33
Homer I. Steffa, Mechanical Designing Engineer	250.00	275.00
L. C. Whittemore, Assistant Sanitary Engineer	250.00	275.00
J. P. Gallagher, Resident Engineer to Assistant Engineer	200.00	225.00
L. B. Barker, Resident Engineer to Assistant Engineer	200.00	225.00
Edwin A. Howes, Bridge Computor to Bridge Designer	200 00	225.00
Ingolf Erdal, Bridge Computor to Bridge Designer	200.00	225.00

	Per Month From	To
Fred Hedberg, Bridge Computor to Bridge Designer	200.00	225.00
Richard DeYoung, Draftsman to Bridge Designer	190.00	225 00
Jas. T. O'Connor, Junior Engineer to Resident Engineer	175.00	200.00
Norman Newlands, Junior Engineer to Resident Engineer	175.00	200.00
Benj. J. Curtis, Junior Engineer to Resident Engineer	175.00	200.00
P. E. Connor, Junior Engineer to Resident Engineer	175.00	200.00
W. T. Lynch, Record Clerk	175.00	200.00
Thomas J. Welsh, Cost Clerk	160.00	175.00
R. C. Galke, Draftsman	160.00	175.00
Fred W. Kirk, Draftsman	160.00	175 00
M. P. Williams, Draftsman	160.00	175.00
N. R. Herlihy, Instrument Man to Junior Engineer	150 00	175.00
Rudolph Christoph, Superintendent	150.00	165.00
Lewis H. Gray, Draftsman	125.00	140.00
W. G. Knaus, Draftsman	125.00	150.00
A. A. Bleau, Draftsman to Assistant Operating Engineer	125.00	150.00
John R. Palmer, Assistant Chemist to Principal Assistant Chemist	115.00	150.00
E. H. Morgan, Assistant Chemist to Principal Assistant Chemist	115.00	150.00
Herbert Swanson, Assistant Chemist	115.00	125.00
Frank Palermo, Launch Engineer	115.00	125.00
Edward Edinger, Clerk to Assistant Record Clerk	115.00	130.00
Nellie McArdle, Stenographer	110.00	125.00
Edwin C. Crowe, Tracer	85.00	100.00
Herman B. Klahre, Rodman to Sub-Instrument Man	115.00	130.00
Edw. E. Bochmann, Rodman to Sub-Instrument Man	115 00	130.00
Robt. Gilmartin, Rodman to Computor	115.00	120 00
William J. Hahn, Inspector to Computor	115.00	120.00
J. W. Beckstrom, Inspector to Computor	115.00	120.00
Theo. O. Burgess, Assistant Chemist	100.00	125.00
Joseph Veugler, Craneman (Union scale)	7.00 day	
Patrick Holland, Steamfitter (Union scale)	6.50 day	7.00
Thos. McCartan, Steamfitter (Union scale)	6.50 day	7.00
John Cameron, Steamfitter (Union scale)	6.50 day	7.00
Max Nork, Machinist (Union scale)	150.00 hour	.85

New Appointment—Position Created—

Joseph McGuire, Laborer	95.00

Title of Position Changed—

James McDonald, Lock Tender to Bridge Tender	100.00
Edwin Lyons, Flagman to Rodman	100.00

	Per Month From	To
Dropped from Service—Positions Abolished—		
Charles Kevil, Clerk	125.00	
Alex. Johnston, Fireman	110.00	
John P. Doyle, Oiler	110.00	
M. F. Walsh, Oiler	110.00	
F. A. Wagner, Oiler	110.00	
Position of Two Oilers	110.00	
Patrick Coyle, Oiler	110.00	
Ladislov Sekvenc, Oiler	110.00	
Peter Keniry, Relief Oiler	110.00	
Position of One Machinist	150.00	
Position of Two Stationary Engineers	150.00	
Position of One Force Account Man	120.00	
G. A. Ripley, Filter Attendant	110.00	
John Burke, Filter Attendant	110.00	
DEPARTMENT OF ELECTRICITY—		
Increases—		
John T. Miller, Draftsman	150.00	175.00
Mae Broderick, Stenographer	110.00	125.00
Harriet Stephens, Clerk	55.00	75.00
W. J. Moore, Operating Engineer	275.00	300.00
A. T. Weatherwax, Assistant Operating Engineer	225.00	240.00
J. F. Vedder, Load Dispatcher	165.00	180.00
W. J. Kloss, Load Dispatcher	165.00	180.00
M. T. Coughlin, Load Dispatcher	165.00	180.00
J. S. Black, Load Dispatcher	165.00	180.00
A. E. Wallace, Relief Operator to General Operator	130.00	145.00
Jos. T. Layton, Relief Operator	130.00	145.00
L. A. Jones, Relief Operator	110.00	125.00
Max Ebler, Relief Operator	110.00	125.00
J. Mildenberg, Relief Operator	110.00	125.00
J. T. Hawley, Superintendent Power House	225.00	250.00
K. G. Close, Chief Operator Power House	165.00	190.00
E. F. Konopack, Operator	150.00	180.00
E. Bewersdorf, Operator	150.00	180.00
S. Merritt, Operator	150.00	180.00
Position of One Relief Operator and Assistant Operator to Relief Operator	130.00	180.00
T. Gunderson, Assistant Operator—Power House	130.00	145.00
George Simmons, Assistant Operator	130.00	145.00
Robert Davidson, Assistant Operator	130.00	145.00
A. Leidig, Maintenance Man	125.00	155.00
M. C. Rich, Maintenance Man	125.00	155.00
A. Suffern, Machinist (Union scale)	125.00	hour .85
Fred Westerberg, Machinist (Union scale)	125.00	hour .85
Edward Held, Operator Terminal Station	140.00	155.00
G. H. Gehrke, Operator	140.00	155.00
George Tuttle, Operator	140.00	155.00

	Per Month	
	From	To
P. J. Hanratty, Floor Operator	130.00	145.00
C. J. Quinlan, Floor Operator	130.00	145.00
Joseph Curtin, Floor Operator	130.00	145.00
William Flight, Chief Operator City Hall	165.00	180.00
Knute Anderson, Operator	130.00	145.00
F. C. Lambert, Operator	130.00	145.00
H. E. Reilly, Operator	110.00	125.00
C. J. Ward, Operator	110.00	125.00
Frank Davidson, Operator	110.00	125.00
J. L. Cotey, Operator	110.00	125.00
W. E. Nancarrow, Operator	110.00	125.00
E. P. DeBarr, Operator	110.00	125.00
P. J. English, Operator	110.00	125.00
H. S. Hart, Operator	110.00	125.00
Chas. Rudd, Operator	110.00	125.00
W. Underdown, Operator	110.00	125.00
R. W. Faupel, Operator	110.00	125.00
R. W. Newman, Operator	110.00	125.00
Thomas Podraza, Operator	110.00	125.00
S. H. Reed, Operator	110.00	125.00
Wm. H. Greene, Operator	110.00	125.00
Wm. Kleiber, Operator	110.00	125.00
Chas. Weber, Operator	110.00	125.00
E. Martin, Operator	110.00	125.00
J. Kolloch, Operator	110.00	125.00
P. Kacyerzewski, Operator	110.00	125.00
J. A. Johnson, Line Superintendent	210.00	225.00
James Sharp, General Foreman	210.00	225.00
J. Lamping, Line Foreman	175.00	190.00
C. C. Wilson, Line Foreman	175.00	190.00
Jas. J. Finneran, Line Foreman	175.00	190.00
H. W. Newman, Line Foreman	175.00	190.00
C. O'Leary, Lineman	150.00	165.00
William Jones, Lineman	150.00	165.00
James Britton, Lineman	150.00	165.00
A. Jorgenson, Lineman	150.00	165.00
H. Inglebright, Lineman	150.00	165.00
Owen McLane, Lineman	150.00	165.00
J. R. Weston, Lineman	150.00	165.00
P. B. Simonton, Lineman	150.00	165.00
I. L. Damrow, Lineman	150.00	165.00
Arthur Hull, Lineman	150.00	165.00
Edward Lee, Lineman	150.00	165.00
A. R. Vershave, Temporary Lineman	150.00	165.00
Wm. G. Zepp, Temporary Lineman	150.00	165.00
Frank Hobbs, Temporary Lineman	150.00	165.00
Daniel McAvoy, Temporary Lineman	150.00	165.00
Frank Guibard, Temporary Lineman	150.00	165.00
W. O. Kline, Temporary Lineman	150.00	165.00

	Per Month From	To
J. J. Dassie, Temporary Lineman	150.00	165.00
J. M. Kelly, Temporary Lineman	150.00	165.00
F. S. Allen, Temporary Lineman	150.00	165.00
Thos. J. Falls, Temporary Lineman	150.00	165.00
T. A. Singer, Temporary Lineman	150.00	165.00
J. F. Barry, Temporary Lineman	150.00	165.00
W. Glass, Temporary Lineman	150.00	165.00
Thos. Woods, Groundman	100.00	115.00
Dennis Nolan, Groundman	100.00	115.00
Thomas Lane, Temporary Groundman	100.00	115.00
George Mitchell, Temporary Groundman	100.00	115.00
Peter Hart, Temporary Groundman	100.00	115.00
Nicholas Martin, Temporary Groundman	100.00	115.00
P. L. Englert, Temporary Groundman	100.00	115.00
Michael Hogan, Temporary Groundman	100.00	115.00
Joseph Miller, Foreman Inside Maintenance	175.00	190.00
R. J. Kehoe, Inside Repairman	140.00	155.00
Henry Haag, Inside Repairman	140.00	155.00
Paul Matt, Inside Repairman	140.00	155.00
Thomas Sheahan, Temporary Inside Repairman	140.00	155.00
E. F. Hoffman, Temporary Inside Repairman	140.00	155.00
R. T. Kelly, Assistant Repairman	115.00	130.00
J. H. Weber, Assistant Repairman	115.00	130.00
Thomas McDonough, Assistant Repairman	115.00	130.00
H. J. O'Connell, Temporary Assistant Repairman	115.00	130.00
W. F. Krippes, Superintendent of Meters	200.00	215.00
George C. Cassard, Meter Foreman	150.00	165.00
George Enright, Meter Inspector	125.00	140.00
W. Ruehrdanz, Meter Inspector	125.00	140.00
Edw. Downs, Meter Inspector	125.00	140.00
Fred Kroplowski, Meter Inspector Helper	100.00	115.00
William Frost, Meter Inspector Helper	100.00	115.00
S. Murphy, Temporary Meter Inspector Helper	100.00	115.00
F. A. DeMuth, Testing Engineer	200.00	215.00
C. E. Jay, Foreman of Tests	150.00	165.00
R. C. Pedrick, Electrician	135.00	155.00
E. P. Spriegle, Electrician	135.00	155.00
H. Hullinger, Electrician Helper	110.00	130.00
J. L. Collins, Electrician Helper	110.00	130.00
B. H. Stuber, Machinist (Union scale)	135.00	hour .85
Charles Larson, Machinist (Union scale)	125.00	hour .85
George B. Kelly, Captain Boat Robt. R	125.00	150.00
T. J. Higgins, Pilot Boat Robt. R	125.00	150.00
Geo. H. Gardner, Engineer Boat Robt. R	125.00	150.00
W. R. Kneeland, Engineer Boat Thos. A	100.00	125.00
Peter Naughton, Deckhand Boat Robt. R	100.00	115.00
J. E. Greenwald, Chauffeur	110.00	125.00
John Dean, Chauffeur	110.00	125.00
Henry Smith, Chauffeur	110.00	125.00

	Per Month From	To
J. Neckerman, Chauffeur	110.00	125.00
J. Crean, Chauffeur	110.00	125.00
Sydney McWhirter, Chauffeur	110.00	125.00
J. McCummiskey, Chauffeur	110.00	125.00
Andrew Blomgren, Chief Engineer (Our portion of expense at the substation—City of Berwyn)	20.00	35.00
Chas. Thorslund, Operator (Our portion of expense at the substation—City of Berwyn)	10.00	25.00
R. Hockzema, Operator (Our portion of expense at the substation—City of Berwyn)	10.00	25.00

New Appointment—Position Created—

William B. Lambe, Inspector and Appraiser.....$150.00

Dropped from Service—Positions Abolished—

Frank F. Hoffman, Stenographer	$125.00
P. J. McNamara, Watchman	96.00
A. J. Peck, Cable Splicer	.87½ hour
Thos. I. Healy, Cable Splicer	.87½ hour
Patrick W. Ryan, Cable Splicer Helper	.62½ hour
Position of Three Clerks	125.00
Position of One Inspector	135.00
Position of One Carpenter	.80 hour

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAMES H. LAWLEY,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

Mr. Nance moved that the report of the Committee on Employment be amended by striking out the figures "$100.00" as the salaries per month for patrolmen for the first six months' service and substituting in lieu thereof the figures "$115.00."

On roll call the motion was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller and Paullin—Six.

The question recurring on the original motion to receive, approve and place the report on file was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Unanimous consent first having been obtained, President Sergel made the following remarks:

"The Chair approves this report as a whole. A few of the larger salaries he would not vote for if they were alone, but he feels inclined to vote for the entire report, however.

"The Chair does not by voting "aye" concede that the Committee on Employment or the Board has the right to fix, increase or decrease the salary of the Secretary to the President. Before the Committee on Employment took action in the matter the Chair had taken ac-

tion and had increased, in accordance with the statute, the salary of his Secretary, and had so notified the Committees on Finance and Employment, but he feels highly gratified that the Committees on Finance and Employment have approved of his action in increasing the salary of his Private Secretary."

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, February 6, 1919.

To the Honorable, the President and the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development presents herewith a renewal of contract, in duplicate with the Acme Steel Goods Company, a corporation, 2834 Archer Avenue, wherein said company agrees to take and the Sanitary District agrees to furnish, electric power for a period of sixteen months from January 1, 1919, upon the terms and conditions set forth in said contract which is in the usual form and has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and Clerk be, and they are hereby, authorized and directed to execute, in duplicate, the attached contract, which has been duly executed by said Company.

Respectfully submitted,
H. E. LITTLER,
Chairman,
GEORGE W. PAULLIN,
WM. J. HEALY,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, February 6, 1919.

To the Honorable, the President, and the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN—Your Committee on Electrical Development presents herewith a renewal of contract, in duplicate with The Industrial Home for the Blind, a municipal corporation, 1901 Marshall Boulevard, Chicago, wherein said corporation agrees to take and the Sanitary District agrees to furnish, electric power for a period of one year, upon the terms and conditions set forth in said contract which is in the usual form and has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and Clerk be, and they are hereby, authorized and directed to execute, in duplicate, the attached contract, when the same has been executed by said Industrial Home for the Blind.

Respectfully submitted,
H. E. LITTLER,
Chairman,
GEORGE W. PAULLIN,
WM. J. HEALY,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 6, 1919.

To the Honorable, the President and the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has had under consideration the question of the expenditures of The Sanitary District of Chicago for its various corporate purposes for the fiscal year beginning January 1, 1919 and ending December 31, 1919, and has also considered the draft of ordinance to be passed and adopted by the Board of Trustees termed the "Annual Appropriation Bill," therefore, makes the following report:

Your Committee duly considered the estimates of expenditures for the fiscal year 1919 submitted by the heads of departments to the Clerk, and thereafter transmitted by him to your Committee, and amended same in certain particulars, which estimates as amended were and are approved by your Committee.

The "Departmental Expenditure Estimates" for the fiscal year 1919, prepared by the heads of departments and submitted as aforesaid, the details of which are contained in form of "Appropriation Bill, for the fiscal year 1919, are presented herewith, as amended by your Committee on Finance, and your Committee recommends that said "Departmental Expenditure Estimates" for the fiscal year 1919, be printed in the Proceedings of the Board, or in pamphlet form, or both, as the Committee on Finance may direct, for easy reference and examination, and as a guide for controlling expenditures by the Board of Trustees during the fiscal year 1919.

Your Committee further reports that the Clerk of The Sanitary District of Chicago submitted to your Committee "Estimate of the Revenues of The Sanitary District of Chicago for the Fiscal Year 1919," which was duly considered by your Committee. Your Committee finds that the estimated revenues of The Sanitary District of Chicago for the fiscal year 1919 available for expenditures exclusive of the tax levy for the fiscal year 1919 (arranged according to Budgetary Revenue Accounts of the Sanitary District) are as follows:

Balance in hands of Treasurer and Clerk of The Sanitary District of Chicago, January 1, 1919		$1,173,830.74
1. GENERAL REVENUES.		
11 Taxes levied by the Sanitary District of Chicago for the years 1917 and 1918 and not expended or collected prior to January 1, 1919		$3,394,603.61
12 Revenues from Fees		25.00
14 Revenues from Forfeits		50.00
2. CONTRACTUAL REVENUES. *Commercial.*		
21 Revenues from Construction Work	$	23,596.10
23 Revenues from Electrical Department Service		995,000.00
24 Revenues from Water Service		16,500.00
25 Revenues from Sundry Sales		20,800.00
27 Revenues from Rentals and Easements		60,030.00
3. CONTRACTUAL REVENUES. *Non-Commercial.*		
31 Revenues from Interest	$	38,810.64
33 Revenues from Discounts		200.00
34 Revenues from Unsold Bonds, 30th and 31st Issues		100,985.00
Revenues from Proposed 32nd Issue Bonds		3,000,000.00
Total		$8,824,431.09

Your Committee further finds that the difference between the necessary expenditures of The Sanitary District of Chicago for its corporate purposes for the fiscal year beginning January 1, 1919, and ending December 31, 1919, and the available revenues of The Sanitary District of Chicago for said year, exclusive of the tax levy for said year is $6,575,-

458.15; and therefore your Committee finds that it will be necessary for The Sanitary District of Chicago to levy a tax in the total sum of $6,575,458.15 for the fiscal year 1919.

Your Committee recommends that a tax for said amount be levied for the year 1919, itemized as follows:

For the payment of bonds maturing during the year beginning January 1, 1919 and ending December 31, 1919	$1,526,000.00
To provide for the payment of interest upon bonds accruing during the year beginning January 1, 1919 and ending December 31, 1919	668,620.00
For other corporate purposes of The Sanitary District of Chicago the sum of	4,380,838.15
Total	$6,575,458.15

Your Committee further reports that it has prepared and herewith transmits an ordinance entitled "An Ordinance of the Board of Trustees of The Sanitary District of Chicago, appropriating moneys for its corporate purposes to be expended during the fiscal year beginning January 1, 1919, and ending December 31, 1919," and recommends that the Board of Trustees do pass and adopt said ordinance.

Your Committee, therefore, recommends the passage of the following orders:

Ordered, That the foregoing report, findings and recommendations of your Committee be, and the same are hereby approved and adopted; and it is further

Ordered, That the "Departmental Estimates for the Fiscal Year 1919" submitted by the heads of departments, and as amended by your Committee mentioned in the foregoing report of your Committee, be printed in the Proceedings of the Board, or in pamphlet form, or both, as and when directed by the Committee on Finance; and it is further

Ordered, That the report of your Committee and the ordinance entitled "An Ordinance of the Board of Trustees of The Sanitary District of Chicago, appropriating moneys for its corporate purposes to be expended during the fiscal year beginning January 1, 1919 and ending December 31, 1919," submitted by your Committee, upon the passage, adoption and approval of said ordinance, be immediately published at least once in a newspaper published within the territorial limits of The Sanitary District of Chicago, and the Clerk of The Sanitary District of Chicago is hereby authorized and directed to carry out said orders and to incur the necessary expense therefor.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman,
MATT A. MUELLER,
GEORGE W. PAULLIN,

Committee on Finance of the Board of Trustees of the Sanitary District of Chicago.

H. E. LITTLER,
PATRICK J. CARR,
WM. J. HEALY,

Members of the Board of Trustees of The Sanitary District of Chicago Participating in the Deliberations of Said Committee on Finance Above Mentioned and Approving the Foregoing Report.

Approved as to form:

C. ARCH WILLIAMS,
Attorney.

Mr. Lawley moved that the report be adopted and the accompanying orders passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

TEMPORARY CHAIRMAN.

President Sergel called Mr. Healy to the Chair and took a place on the floor.

Mr. Lawley presented and the Clerk read the annual appropriation ordinance of The Sanitary District of Chicago for the fiscal year 1919.

AN ORDINANCE

Of the Board of Trustees of The Sanitary District of Chicago Appropriating Moneys for Its Corporate Purposes to be Expended During the Fiscal Year Beginning January 1, 1919, and Ending December 31, 1919.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That this ordinance be, and the same is hereby, termed the "Annual Appropriation Bill of The Sanitary District of Chicago for the Fiscal Year Beginning January 1, 1919, and Ending December 31, 1919."

SECTION 2. That the following amounts, or so much thereof as may be authorized by law, and as may be needed, are hereby appropriated for the corporate purposes of The Sanitary District of Chicago for the fiscal year beginning January 1, 1919, and ending December 31, 1919. The departments and the purposes for which appropriations are made, and the amounts appropriated for the various purposes, are as follows:

1—DEPARTMENT OF ENGINEERING

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

General Engineering Division

Chief Engineer, 1 at $11,000.00	$ 11,000.00
Assistant Chief Engineer, 1 at $9,000.00	9,000.00
Division Engineers, 2 at $5,000.00	10,000.00
Hydraulic Engineer, 1 at $3,300.00	3,300.00
Resident Engineers, 2 at $2,400.00	4,800.00
Draftsmen, 4 at $2,100.00	8,400.00
Photographer, 1 at $1,920.00	1,920.00
Draftsman, 1 at $1,680.00	1,680.00
Sub-Instrument Man, 1 at $1,560.00	1,560.00
Stenographer, 1 at $1,500.00	1,500.00
Tracer, 1 at $1,200.00	1,200.00
Chauffeur, 1 at $1,500.00	1,500.00
	$ 55,860.00

Accounting and Records

Record Division

Record Clerk, 1 at $2,400.00	2,400.00
Junior Engineer, 1 at $2,100.00	2,100.00
Cost Clerk, 1 at $2,100.00	2,100.00

Sub-Instrument Man, 1 at $1,560.00	1,560.00
Computers, 4 at $1,440.00	5,760.00
Assistant Record Clerk, 1 at $1,560.00	1,560.00
Stenographers, 2 at $1,320.00	2,640.00
	$ 18,120.00

Experimentation and Investigation

Sanitary Division

Sanitary Engineer, 1 at $6,600.00	6,600.00
Division Engineer, 1 at $4,500.00	4,500.00
Assistant Sanitary Engineer, 1 at $3,300.00	3,300.00
Chemist, 1 at $3,000.00	3,000.00
Assistant Engineer, 1 at $3,000.00	3,000.00
Assistant Engineers, 3 at $2,700.00	8,100.00
Resident Engineers, 2 at $2,400.00	4,800.00
Principal Assistant Chemists, 2 at $1,800.00	3,600.00
Draftsmen, 2 at $1,800.00	3,600.00
Assistant Chemists, 2 at $1,500.00	3,000.00
Laboratory Assistants, 2 at $1,320.00	2,640.00
Filter Attendants, 3 at $1,320.00	3,960.00
Sub-Instrument Men, 2 at $1,560.00	3,120.00
Stenographer, 1 at $1,320.00	1,320.00
	$ 54,540.00

Gauge Reading

Gauge Reader, 1 at $123.00	123.00
Gauge Reader, 1 at $120.00	120.00
Gauge Readers, 2 at $63.00	126.00
Gauge Reader, 1 at $60.00	60.00
	$ 429.00

Construction and Design

Bridge Division

Chief Bridge Engineer, 1 at $7,200.00	7,200.00
Assistant Bridge Engineer, 1 at $4,000.00	4,000.00
Assistant Engineer, 1 at $3,000.00	3,000.00
Bridge Designers, 4 at $2,700.00	10,800.00
Bridge Draftsman, 1 at $2,400.00	2,400.00
Bridge Tracers, 2 at $1,800.00	3,600.00
Superintendent, 1 at $1,980.00	1,980.00
Sub-Instrument Man, 1 at $1,560.00	1,560.00
	$ 34,540.00

Channel Construction Division

Assistant Engineers, 2 at $2,700.00	5,400.00
Resident Engineer, 1 at $2,400.00	2,400.00
Junior Engineer, 1 at $2,100.00	2,100.00
Sub-Instrument Men, 5 at $1,560.00	7,800.00
Inspector, 1 at $1,500.00	1,500.00
Rodmen, 6 at $1,380.00	8,280.00
(For the first 6 months' service receive $100 per month after 6 months they are to receive $115.00 per month.)	
Inspector, 1 at $1,380.00	1,380.00
Watchman, 2 at $1,152,00	2,304.00
	$ 31,164.00

Outlet and Intercepting Sewer Construction Division

Division Engineer, 1 at $5,000.00	5,000.00
Assistant Engineer, 3 at $2,700.00	8,100.00
Resident Engineers, 1 at $2,400.00	2,400.00
Junior Engineers, 2 at $2,100.00	4,200.00
Instrument Men, 4 at $1,800.00	7,200.00
Sub-Instrument Men, 4 at $1,560.00	6,240.00
Computers, 4 at $1,440.00	5,760.00
Inspectors, 2 at $1,380.00	2,760.00
Rodmen, 28 at $1,380.00	38,640.00
(For the first 6 months' service receive $100.00 per month, after 6 months' service $115.00 per month.)	
Watchman, 1 at $1,152.00	1,152.00
	$ 81,452.00

Mechanical Division

Mechanical Designing Engineer, 1 at $3,300.00	3,300.00
Assistant Mechanical Designing Engineer, 1 at $2,400.00	2,400.00
Assistant Operating Engineer, 1 at $1,800.00	1,800.00
Mechanical Draftsman, 1 at $1,800	1,800.00
	$ 9,300.00

Maintenance

Channel Maintenance Division

Division Engineer, 1 at $4,000.00	4,000.00
Instrument Man, 1 at $1,800.00	1,800.00
Sub-Instrument Man, 1 at $1,560.00	1,560.00
Rodmen, 4 at $1,380.00	5,520.00

(For the first 6 months' service $100.00 per month, after 6 months' service $115.00 per month.)

Inspector, 1 at $1,380.00	1,380.00
Launch Engineer, 1 at $1,500.00	1,500.00
	$ 15,760.00

Operation of Pumping Stations

Thirty-ninth Street Pumping Station

Engineer in Charge, 1 at $3,000.00	$ 3,000.00
Machinist (at union scale), 1	1,800.00
Stationary Engineers, 5 at $1,800.00	9,000.00
Millwright, 1 at $1,680.00	1,680.00
Craneman (at union scale), 1	2,100.00
Assistant Craneman, 1 at $1,440.00	1,440.00
Boiler Washer, 1 at $1,320.00	1,320.00
Firemen, 4 at $1,320.00	5,280.00
Oilers, 8 at $1,320.00	10,560.00
Laborers, 16 at $1,152,00	18,432.00
Steamfitters (at union scale), 2	5,000.00
	$ 59,612.00

Lawrence Avenue Pumping Station

Engineer in Charge, 1 at $2,400.00	2,400.00
Stationary Engineers, 3 at $1,800.00	5,400.00
Oilers, 5 at $1,320.00	6,600.00
Firemen, 4 at $1,320.00	5,280.00
Boiler Washer, 1 at $1,320.00	1,320.00
Crib Keeper, 1 at $1,200.00	1,200.00
Laborers, 6 at $1,152.00	6,912.00
Steamfitter (at union scale), 1	2,500.00
	$ 31,612.00

Locks, Dams and Bridges

Chief Dam Tender, 1 at $1,500.00	1,500.00
Assistant Chief Dam Tender, 1 at $1,380.00	1,380.00
Assistant Dam Tenders, 4 at $1,200.00	4,800.00
Bridge Tenders, 3 at $1,200.00	3,600.00
	$ 11,280.00

11 Total ..... $ 403,669.00

12—SALARIES AND WAGES OF TEMPORARY EMPLOYES

Experimentation and Investigation

Sanitary Division

Carpenters (at union scale)	2,000.00

Laborers	7,500.00
Steamfitters (at union scale)	1,000.00
Electrician (at union scale)	500.00
	$ 11,000.00

Maintenance

Channel Maintenance Division

Foreman	6,000.00
Timekeepers (9 months at $100 per month), 2	1,800.00
Mechanics	3,000.00
Firemen	1,000.00
Operators	1,000.00
Nozzelmen	1,000.00
Laborers	70,000.00
Blacksmiths	1,200.00
Watchmen	3,500.00
	$ 88,500.00

Bridge Maintenance Division

Carpenter Foreman (at union scale)	3,000.00
Carpenters (at union scale)	7,000.00
Carpenter Helpers (at union scale))	5,000.00
Machinist Foreman (at union scale)	200.00
Machinist (at union scale)	600.00
Painters (at union scale)	12,000.00
Laborers	6,000.00
	$ 33,800.00

Sewer Maintenance Division

Foreman	420.00
Laborers	1,500.00
	$ 1,920.00

Operation

Pumping Stations

Emergency Labor	$ 10,000.00
Additional Temporary Employes	$ 15,000.00

12 Total 160,220.00

13—COMPENSATION FOR PERSONAL SERVICES, OTHER THAN SALARIES AND WAGES

Construction and Design

Bridge Division

Railroad Engineering	$ 3,000.00

	Railroad Inspection	2,000.00	
	Signal and interlocking expert service	2,000.00	
	Plans for pumping stations	10,000.00	
13	Total		17,000.00
14—AWARDS AND EMPLOYES' CLAIMS			
	(Workmens' Compensation)	5,000.00	
	This includes payments to employes, their heirs, or assigns through the operations of the workmens' compensation act.		
14	Total		5,000.00
	1—Total Personal Service		**$ 585,889.00**

2—Contractual and Impersonal Service

21—TRANSPORTATION			
211	Railroad and steamship transportation (other than local) of persons	$ 5,000.00	
212	Local transportation of persons	5,000.00	
213	Railroad and steamship transportation of things	25,000.00	
214	Drayage	2,400.00	
215	Canal, river and harbor service	2,100.00	
21	Total		$ 39,500.00
22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE			
221	Telegraph, cable, wireless and messenger service	$ 50.00	
222	Postage	1,000.00	
223	Telephone service	2,500.00	
2231	Contract, office and plant	$ 2,000.00	
2232	Individual, contract or calls	500.00	
22	Total		3,550.00
23—PUBLISHING, PRINTING AND PHOTOGRAPHING			
232	Publishing of pamphlets and books	$ 3,000.00	
233	Printing, engraving, multigraphing and mimeographing	500.00	
234	Photographing	100.00	
235	Blue printing	2,000.00	
23	Total		5,600.00
24—ADVERTISING			1,000.00
25—LIGHT, HEAT, POWER AND WATER SERVICE			
251	Electric current	4,000.00	

252	Gas (delivered through pipes)	600.00	
254	Water (delivered through pipes)	100.00	
25	Total		4,700.00
26—TEAMING, GARAGE AND STABLE SERVICE			
261	Hire of teams, horses and carts	$ 12,000.00	
262	Keeping, care and cleaning of motor vehicles	1,500.00	
26	Total		13,500.00
27—BOARDING AND LODGING			3,500.00
	Includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District.		
28—IMPERSONAL SERVICES, SUNDRY AND N. O. C.*			
281	Public office and court service	$ 50.00	
282	Towel and laundry service	400.00	
283	Water and ice service	1,200.00	
284	Testing service	5,000.00	
285	Test boring	4,000.00	
286	Hospital service	100.00	
289	Impersonal service, N. O. C.	1,000.00	
28	Total		11,750.00
29—REPAIR AND REPLACEMENT SERVICE			
	This includes repairs and replacements by contract or open market order necessary to keep structures, machinery, equipment, apparatus, transmission and distribution lines and other property in good operating condition, and which do not add to the value of fixed assets. This does not include materials or parts purchased for repairs to be made by employes of the Sanitary District.		
29-511	Prime movers, pumping and steam plant equipment	$ 10,700.00	
29-516	Heating and ventilating equipment	100.00	
29-517	Lifting equipment	500.00	
29-518	Electrical equipment	2,250.00	
29-525	Digging and agricultural implements	10.00	
29-526	Tools	25.00	
29-527	Transporting and conveying equipment	4,500.00	
5271	Motor vehicle equipment	$ 500.00	
5273	Floating equipment	4,000.00	
29-529	Portable plant equipment, N. O. C.	100.00	
29-53	Furniture, office and household equipment	100.00	
29-542	Life saving equipment	50.00	

*Wherever the letters "N. O. C." appear in this ordinance, they signify "Not otherwise classified."

29-551	Laboratory equipment	25.00	
29-552	Photographic equipment	25.00	
29-553	Testing equipment	50.00	
29-554	Engineering and drafting equipment	250.00	
29-555	Books, maps and charts	60.00	
29-57	Uniforms, wearing apparel and other personal equipment	10.00	
29-58	Equipment, N. O. C.	100.00	
29-61	Buildings	500.00	
29-62	Bridges	1,200.00	
29-63	Locks, dams, breakwaters and cribs	20,000.00	
29-64	Channels, ditches, reservoirs and docks	50,000.00	
29-65	Outfall and intercepting sewers, tunnels and sewage purification structures	2,000.00	
29-66	Pavements and sidewalks	3,000.00	
29-451	Building and cabinet making parts	10.00	
29-452	Motor vehicle and motor boat parts	25.00	
29-456	Valve and valve parts	25.00	
29	Total		95,615.00
	2—Total Contractual and Impersonal Service		**$ 178,715.00**

3—Supplies

31—OFFICE AND DRAFTING SUPPLIES			
311	Office supplies	$ 3,000.00	
312	Drafting supplies	750.00	
31	Total		$ 3,750.00
32—FUEL AND ILLUMINANTS			
321	Coal, coke, charcoal and wood	$120,000.00	
322	Liquid fuels and illuminants	1,300.00	
323	Gas fuel (bought in containers)	10.00	
324	Candles, tapers and matches	10.00	
32	Total		121,320.00
34—CHEMICALS, LABORATORY, FIRST AID AND PHOTOGRAPHIC SUPPLIES			
341	Chemicals and laboratory supplies	$ 1,400.00	
342	First aid supplies	200.00	
343	Photographic supplies	400.00	
34	Total		2,000.00
35—EXPLOSIVES			100.00
36—MECHANICAL, PLANT AND ELECTRICAL SUPPLIES AND LUBRICANTS			
361	Mechanical and plant supplies	$ 5,000.00	

362	Electrical supplies	1,000.00	
363	Lubricants	4,200.00	
364	Motor vehicle and motor boat supplies	25.00	
36	Total		10,225.00
37—CLEANING AND TOILET SUPPLIES			1,050.00
38—FOOD AND HOUSEHOLD SUPPLIES			
381	Food supplies	$ 10.00	
382	Household supplies	50.00	
38	Total		60.00
39—SUPPLIES N. O. C.			100.00
	3—Total Supplies		**$ 138,605.00**

4—Materials and Parts for Repairs and Replacements

40—MATERIALS FOR REPAIRS AND REPLACEMENTS			
401	Raw materials. Includes such items as cinders, clay, granite, gravel, marble, sand, slag, soil and stone.	$ 19,500.00	
402	Metallic materials (exclusive of steel conduit and steel conduit fittings)	13,550.00	
4021	Metal in pigs and scraps	$ 300.00	
4022	Mill metals, structural iron and steel	3,300.00	
4023	Cable and wire	1,100.00	
4024	Chain	350.00	
4025	Pipe and pipe fittings	5,300.00	
4026	Hardware	3,200.00	
403	Building and street surfacing materials	40,000.00	
404	Lumber	24,750.00	
405	Fibre products and insulation materials	500.00	
406	Paints, varnishes, glass, saps, gums and dyes	5,150.00	
407	Leather products	300.00	
408	Conduit and conduit fittings	275.00	
40	Total		$ 104,025.00
45—PARTS FOR REPAIRS AND REPLACEMENTS			
451	Building and cabinet making parts	250.00	
452	Motor vehicle and motor boat parts	750.00	
453	Castings and forgings	3,500.00	
454	Engine and machine parts and protection attachments	4,025.00	
455	Electrical parts	1,575.00	
456	Valves and valve parts	2,800.00	
459	Parts, N. O. C.	2,500.00	

45	Total		$ 15,400.00
	4—Total Materials and Parts		**$ 119,425.00**

5—Equipment

51—FIXED PLANT EQUIPMENT

511	Prime movers, pumping and steam plant equipment		$ 12,300.00
	Ash tank Thirty-ninth street pumping station	$ 3,000.00	
	Non-return valves for six old boilers.	2,000.00	
	Gallery back of Edgemoore boilers..	500.00	
	Drainage system for sewage pumping pits	800.00	
	Ash conveyor Lawrence ave. pumping station	1,500.00	
	Damper regulators	3,000.00	
	Blower and pump activated sludge plant	1,000.00	
	Pumping and steam plant equipment, N. O. C.	500.00	
512	Machines and machine shop equipment		$ 100.00
516	Heating and ventilating equipment		200.00
517	Lifting equipment (mechanical hoist for screens in sewage chamber)		1,500.00
518	Electrical equipment		1,250.00
519	Fixed plant equipment, N. O. C.		600.00
51	Total		$ 15,950.00

52—PORTABLE PLANT EQUIPMENT

521	Dredging and excavating equipment		$ 50.00
522	Dragging and hoisting equipment		50.00
523	Road surfacing equipment		75.00
525	Digging and agricultural implements		625.00
526	Tools		875.00
527	Transporting and conveying equipment		2,550.00
5271	Motor vehicle equipment	$ 500.00	
5273	Floating equipment	1,800.00	
5274	Locomotives and cars	250.00	
529	Portable plant equipment, N. O. C.		$ 2,000.00
52	Total		6,225.00
53	FURNITURE, OFFICE AND HOUSEHOLD EQUIPMENT		2,500.00

54—EQUIPMENT FOR PRESERVING LIFE AND PROPERTY

541	Fire prevention and fire fighting equipment	$ 150.00
542	Life saving equipment	100.00

54	Total		250.00
55—LABORATORY, PHOTOGRAPHIC, TESTING, ENGINEERING EQUIPMENT AND BOOKS			
551	Laboratory equipment	$ 500.00	
552	Photographic equipment	100.00	
553	Testing equipment	2,000.00	
554	Engineering and drafting equipment	500.00	
555	Books, maps and charts	100.00	
55	Total		3,200.00
57—UNIFORMS, WEARING APPAREL AND OTHER PERSONAL EQUIPMENT			500.00
58—EQUIPMENT, N. O. C.			2,500.00
	5—Total Equipment		**$ 31,125.00**

6—Structures and Non-Structural Improvements

61—BUILDINGS			
61-A—Covering coal bins, Lawrence avenue pumping station		$ 2,500.00	
61-B—Covering coal pile, Lawrence avenue, pumping station		1,000.00	
61-C—Wilmette pumping station addition		500.00	
61-D—Evanston pumping plant		215,000.00	
61-F—Des Plaines river pumping plant and treatment plant		500,000.00	
61-G—Calumet pumping plant		1,000,000.00	
61-H—Ninety-fifth street pumping plant		150,000.00	
61-I—Controlling Works, lighting, Blue Island		6,000.00	
61-J—Controlling Works, house, Blue Island		10,000.00	
61-K—Wrecking Union Loop power house		10,000.00	
61-L—Calumet Power Plant		250,000.00	
61	Total		$ 2,145,000.00
62—BRIDGES AND VIADUCTS			
62A—Twelfth street bridge, Chicago river		$ 100,000.00	
62C1—California avenue bridge, Main channel		175,000.00	
62C2—Crawford avenue bridge, Main channel		175,000.00	
62C3—Cicero avenue bridge, Main channel		175,000.00	
62C4—Seventy-second avenue bridge, Main channel		175,000.00	
62C5—Eight Track bridge, interlocking system, Main channel		40,000.00	
62H1—Ann street bridge, Calumet Sag channel		11,500.00	
62H2—Chicago street bridge, Calumet Sag channel		13,500.00	
62H3—Division street bridge, Calumet Sag channel		15,000.00	
62H4—B. & O. C. T. bridge, Calumet Sag channel		11,000.00	
62H5—B. & O. (Stony Creek) bridge, Calumet Sag channel		10,000.00	

62H6—Grand Trunk Western bridge, Calumet Sag channel	15,000.00	
62H7—Rock Island connecting track bridge, Calumet Sag channel	4,500.00	
62H8—Rock Island main line bridge, Calumet Sag channel	20,000.00	
62H9—B. & O. R. R. interlocking system, Calumet Sag channel	25,000.00	
62 Total		965,500.00

64—CHANNELS, DITCHES, RESERVOIRS AND DOCKS

64A2—Widening Chicago river	$ 30,000.00	
642A3—Repairing Laflin street dock, Chicago river	20,000.00	
642C4—Dredging at Butterfly and Bear Trap dams	25,000.00	
64G2—Constructing liebys, North Shore channel	2,000.00	
642G2—Flattening slopes, North Shore channel	5,000.00	
642G2a—Protecting slopes, North Shore channel	25,000.00	
64H21—Calumet Sag channel, section 1	145,000.00	
64H213—Calumet Sag channel, section 13	700,000.00	
64H214—Calumet Sag channel, section 14	88,500.00	
641H22—Pumping section 2, Calumet Sag channel	2,200.00	
641H23—Pumping section 3, Calumet Sag channel	1,900.00	
641H24—Pumping sections 4 and 12, Calumet Sag channel	8,000.00	
641H29—Byrne Bros claim, section 9, Calumet Sag channel	7,000.00	
641H210—Pumping sections 10, 11 and 12, Calumet Sag channel (3 months additional)	2,500.00	
641H410—Temporary dam, section 10, Calumet Sag channel	12,000.00	
64J6—Main channel storage basin	300,000.00	
64J7—Dredging Little Calumet river	250,000.00	
64 Total		$ 1,624,100.00

65—OUTLETS AND INTERCEPTING SEWERS, TUNNELS AND PLANTS TO REMOVE SOLIDS AND OTHER REFUSE FROM SEWAGE

65M2156—Calumet intercepting sewer, contract No. 1	$225,000.00	
65M2456—Calumet intercepting sewer, contract No. 4	5,000.00	
65M2556—Calumet intercepting sewer, contract No. 5	600,000.00	
65M2656—Calumet intercepting sewer, contract No. 6	105,000.00	
65M2756—Calumet intercepting sewer, contract No. 7	20,000.00	
65M2056—Overflow conduit from Calumet pumping station	125,000.00	
65M2060—Evanston intercepting sewer	10,000.00	
651M2060—Rip-rap Evanston intercepting sewer	15,000.00	
651M2060—Pumping Evanston intercepting sewer	10,000.00	
651M2060—Flushing intake for Evanston intercepting sewer	15,000.00	
65M2062—Des Plaines river intercepting sewer and outlet	568,000.00	
65M2059—Stockyards intercepting sewer	250,000.00	
65M2056A—Outfall sewer and adjunct and addition to Calumet Sag channel	75,000.00	

65M2057—Niles Center sewer outlet		4,000.00	
65J162—Stockyards activated sludge plant		300,000.00	
65S102—Morton Grove addition to plant to remove solids.		35,000.00	
652M1551—Remodeling sewage chamber, Thirty-ninth street		10,000.00	
652M1551a—Vent for sewage chamber, Thirty-ninth street		1,000.00	
652N154—Dredging Thirty-ninth street intake		4,000.00	
65S3a—Tannery testing station		5,000.00	
65S3b—Corn Products Testing station		5,000.00	
65	Total		2,387,000..00
66—PAVEMENTS, SIDEWALKS AND RAILROAD TRACK WORK AND TRESTLES TO CARRY RAILROADS OVER CHANNELS, DITCHES AND INTERCEPTING AND OUTLET SEWERS			
661	Track Work and trestles		
6611	B. and O.—C. T. R. R., Blue Island	$60,000.00	
6612	Grand Trunk Western, Blue Island	32,000.00	
6613	Rock Island connecting track, Blue Island	9,000.00	
6614	Rock Island main line, Blue Island	5,000.00	
662	Railroad Crossings, Calumet intercepting sewer		
6621	I. C. R. R. One hundred and fourth street	22,000.00	
6622	I. C. R. R. One hundred and twenty-first street	4,000.00	
6623	P. C. C. and St. L. R. R., One hundred and twenty-seventh street	5,000.00	
6624	C. & W. I. R. R., section 2	2,000.00	
6625	M. C. R. R., section 1	5,000.00	
6626	Additional railroad work, Blue Island	20,000.00	
66	Total		164,000.00
68—HORTICULTURAL AND LANDSCAPE IMPROVEMENTS			2,000.00
	6—Total Structures and Non-structural Improvements		**$ 7,287,600.00**

7—Acquirement of Land

71	Rock Island property, Sixteenth street	$ 81,643.86	
72	B. & O.—C. T. R. R., Blue Island	2,770.00	
73	Main channel storage basin site	80,000.00	
74	Calumet sewage treatment site	100,000.00	
75	Stockyards activated sludge plant site	400,000.00	
76	Additional sewage treatment and pumping plant sites	350,000.00	
	7—Total Acquirement of Land		**$ 1,014,413.86**

8—Fixed Charges

81—RENTS AND PAYMENTS FOR EASEMENTS AND PERMITS

811	Land rental	$ 300.00	
812	Office and structure rents	1,500.00	
813	Equipment rents	1,500.00	
814	Payment for easements	25,000.00	
	Calumet pumping station, overflow	2,000.00	
	Des Plaines river intercepting sewer	18,000.00	
	Outfall sewer at Oak Forest	5,000.00	
815	Fees for permits	100.00	
81	Total		$ 28,400.00
816A	Capitalization of railroad bridges, Blue Island	75,000.00	
81A	Total		75,000.00

85—INSURANCE

851	Fire insurance	$ 50.00	
852	Marine insurance	50.00	
853	Automobile insurance	300.00	
856	Insurance, N. O. C.	250.00	
85	Total		650.00
	8—Total Fixed Charges		**$ 104,050.00**
99	CONTINGENCIES		$ 155,000.00
	GRAND TOTAL—DEPARTMENT OF ENGINEERING		**$ 9,614,822.86**

3—DEPARTMENT OF ILLINOIS AND MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

Illinois Valley Engineer, 1 at $6,600.00	$ 6,600.00
Assistant Engineer, 1 at $3,600.00	3,600.00
Sub-Assistant Engineers, 2 at $2,400.00	4,800.00
Instrument Man, 1 at $1,920.00	1,920.00
Draftsman, 1 at $1,560.00	1,560.00
Rodman, 1 at $1,380.00	1,380.00

	Watchman, 1 at $1,200.00	1,200.00	
	Stenographer, 1 at $1,500.00	1,500.00	
		$22,560.00	
	Gauge Reading and Water Sampling Division		
	Gauge Readers and Water Samplers, 3 at $132.00	$ 396.00	
	Gauge Readers, 4 at $84.00	336.00	
	Gauge Readers, 23 at $72.00	1,656.00	
		$ 2,388.00	
11	Total		$ 24,948.00
	13—COMPENSATION FOR PERSONAL SERVICE OTHER THAN SALARIES AND WAGES		
	To pay for re-checking water readings		100.00
	14—AWARDS AND EMPLOYES CLAIMS (WORKMEN'S COMPENSATION)		
141	Compensation for injury and death		5,000.00
	1—Total Personal Service		**$ 30,048.00**

2—Contractual and Impersonal Service

	21—TRANSPORTATION		
211	Railroad and steamship transportation (other than local) of persons	$ 830.00	
212	Local transportation of persons	75.00	
213	Railroad and steamship transportation of things	75.00	
214	Drayage	10.00	
215	Canal, river and harbor service	10.00	
21	Total		$ 1,000.00
	22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE		
221	Telegraph	$ 10.00	
222	Postage	65.00	
223	Telephone service	125.00	
2231	Contract, office and plant	$110.00	
2232	Individual, contract or calls	15.00	
22	Total		200.00
	23—PUBLISHING, PRINTING AND PHOTOGRAPHING		
233	Printing, engraving, multigraphing and mimeographing	$ 100.00	

234	Photographing	50.00	
235	Blue printing	75.00	
23	Total		$ 225.00

25—LIGHT, HEAT, POWER AND WATER SERVICE

251	Electric current	$ 150.00	
254	Water (delivered through pipes)	50.00	
25	Total		200.00

26—TEAMING, GARAGE AND STABLE SERVICE

261	Hire of teams, horses and carts	$ 50.00	
262	Keeping care and cleaning of motor vehicles	50.00	
26	Total		100.00

27—BOARDING AND LODGING

Includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District 1,100.00

28—IMPERSONAL SERVICE, SUNDAY AND N. O. C.

281	Public office and court service	$ 10.00	
282	Towel and laundry service	10.00	
283	Water and ice service	10.00	
289	Impersonal service N. O. C.	70.00	
28	Total		100.00

29—REPAIR AND REPLACEMENT SERVICE

(This includes repairs and replacements by contract or open market order necessary to keep structures, machinery, equipment, apparatus, transmission and distribution lines and other property in good operating condition, and which do not add to the value of fixed assets, it does not include material or parts purchased for repairs to be made by employes of the Sanitary District.)

29—452	Motor vehicles and motor boat parts	$ 30.00	
29—516	Heating and ventilating equipment	5.00	
29—5271	Motor vehicle equipment	210.00	
29—5273	Floating equipment	30.00	
29	Total		275.00
	2—Total Contractual and Impersonal Service		**$ 3,200.00**

3—Supplies

31—OFFICE AND DRAFTING SUPPLIES			
311	Office supplies	$ 300.00	
312	Drafting supplies	100.00	
31	Total		$ 400.00
32—FUEL AND ILLUMINANTS			
321	Coal, coke, charcoal and wood	$ 375.00	
322	Liquid fuel and illuminants	190.00	
324	Candles, tapers and matches	10.00	
32	Total		575.00
33—FORAGE AND OTHER SUPPLIES FOR ANIMALS			
331	Forage		5.00
34—CHEMICALS AND PHOTOGRAPHIC SUPPLIES			
341	Chemicals	$ 2.00	
343	Photographer's supplies	8.00	
34	Total		10.00
36—MECHANICAL PLANT AND ELECTRICAL SUPPLIES AND LUBRICANTS			
361	Mechanical supplies	$ 65.00	
362	Electrical supplies	30.00	
363	Lubricants	30.00	
364	Motor vehicle and motor boat supplies	25.00	
36	Total		150.00
37—CLEANING AND TOILET SUPPLIES			40.00
39—SUPPLIES, N. O. C.			50.00
	3—Total Supplies		**$ 1,230.00**

4—Materials and Parts for Repairs and Replacements

40—MATERIALS FOR REPAIRS AND REPLACEMENTS			
401	Raw material such as cinders, clay, granite, gravel, marble, sand, slag, soil and stone	$ 15.00	
402	Metallic materials (inclusive of steel conduit and steel conduit fittings)	55.00	
	4021 Metals in pipe and scrap	3.00	
	4022 Mill metal, structural iron and steel	2.00	
	4023 Cable and wire	25.00	
	4025 Pipe and pipe fittings	15.00	
	4026 Hardware	10.00	

403	Building and street surfacing materials	10.00	
404	Lumber	75.00	
405	Fibre products and insulation materials	10.00	
406	Paints, varnishes, glass, saps, gums and dies	105.00	
407	Leather products	5.00	
40	Total		$ 275.00
45—PARTS FOR REPAIRS AND REPLACEMENTS			
451	Building and cabinet making parts	$ 25.00	
452	Motor vehicle and motor boat parts	250.00	
453	Castings and forgings	15.00	
454	Engine and machine parts	25.00	
455	Electrical parts	75.00	
456	Valves and valve parts	10.00	
459	Parts N. O. C.	25.00	
45	Total		425.00
	4—Total Materials and Parts for Repairs and Replacements		**$ 700.00**

5—Equipment

51—FIXED PLANT EQUIPMENT			
516	Heating and ventilating equipment		$ 50.00
52—PORTABLE PLANT EQUIPMENT			
525	Digging and agricultural implements	$ 10.00	
526	Tools	30.00	
529	Portable plant equipment, N. O. C.	10.00	
52	Total		$ 50.00
53—FURNITURE, OFFICE AND HOUSEHOLD EQUIPMENT			200.00
54—EQUIPMENT FOR PRESERVING LIFE AND PROPERTY			
541	Fire prevention, fire fighting equipment	$ 30.00	
542	Life saving equipment	10.00	
54	Total		40.00
55—LABORATORY, PHOTOGRAPHING, TESTING, ENGINEERING EQUIPMENT AND BOOKS			
551	Laboratory equipment	$ 6.00	
554	Engineering and drafting equipment	24.00	
555	Books, maps and charts	10.00	
55	Total		40.00
57—UNIFORMS, WEARING APPAREL AND OTHER PERSONAL EQUIPMENT			50.00
58—EQUIPMENT, N. O. C.			100.00
	5—Total Equipment		**$ 530.00**

8 Fixed Charges

81—RENTS AND PAYMENTS FOR EASEMENTS AND PERMITS

811	Land rents	$ 20.00	
812	Office and structure rents	5.00	
815	Fees for permits	10.00	
81	Total		$ 35.00

83—TAXES AND SPECIAL ASSESSMENTS

831	Taxes on Sanitary District property		50.00

85—INSURANCE

851	Fire insurance	$ 65.00	
853	Automobile insurance	15.00	
854	Fidelity insurance	3.00	
85	Total		83.00
	8—Total Fixed Charges		**$ 168.00**
99	Contingencies		$ 100.00

GRAND TOTAL—DEPARTMENT OF ILLINOIS AND MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS ..... $ 35,976.00

4—DEPARTMENT OF LAW

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

Attorney, 1 at $10,000.00	$10,000.00
First Assistant Attorney, 1 at $7,000.00	7,000.00
Illinois Valley Attorney, 1 at $6,000.00	6,000.00
Assistant Attorney, 1 at $6,500.00	6500.00
Assistant Attorney, 1 at $6,000.00	6,000.00
Assistant Attorney (4 months), 1 at $6,000.00	2,000.00
Assistant Attorneys, 3 at $4,800.00	14,400.00
Assistant Attorney, 1 at $3,300.00	3,300.00
Assistant Attorneys, 4 at $3,000.00	12,000.00
Law Clerks, 2 at $2,400.00	4,800.00
Investigator, 1 at $2,400.00	2,400.00
Investigator, 1 at $2,100.00	2,100.00
Investigator, 1 at $1,500.00	1,500.00
Docket Clerk, 1 at $1,500.00	1,500.00
Chief Stenographer, 1 at $2,100.00	2,100.00
Stenographers, 2 at $1,500.00	3,000.00
Stenographer and Voucher Clerk, 1 at $1,500.00	1,500.00

	Stenographers, 2 at $1,320.00	2,640.00	
	Clerk, 1 at $1,020.00	1,020.00	
11	Total		$ 89,760.00
	13—COMPENSATION FOR PERSONAL SERVICE, OTHER THAN SALARIES AND WAGES		
	Overflow cases, Illinois valley	$ 12,000.00	
	Tax litigations, Will county	6,000.00	
	Joseph J. Duffy litigation	5,000.00	
	Local attorneys, exclusive of Cook County	2,000.00	
	Special investigator	2,350.00	
	Court reporter services	5,000.00	
	Witness fees, expert and otherwise	5,000.00	
	Special representative at Washington, D. C. pertaining to Federal matters	2,100.00	
	Special services of attorneys, temporarily retained in law cases	15,000.00	
13	Total		54,450.00
	1—Total Personal Service		**$ 144,210.00**

2—Contractual and Impersonal Service

	21—TRANSPORTATION		
211	Railroad and steamship transportation (other than local) of persons	$ 2,000.00	
212	Local transportation of persons	500.00	
213	Railroad and steamship transportation of things	25.00	
214	Drayage	25.00	
21	Total		$ 2,550.00
	22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE		
221	Telegraph, cable, wireless and messenger service	100.00	
222	Postage	150.00	
223	Telephone service	50.00	
2232	Individual, contract or calls	$ 50.00	
22	Total		300.00
	23—PUBLISHING, PRINTING AND PHOTOGRAPHING		
232	Publishing of pamphlets and books	$ 3,500.00	
233	Printing, engraving, multigraphing and mimeographing	25.00	
235	Blue printing	25.00	
23	Total		3,550.00
	24—ADVERTISING		200.00

26—TEAMING, GARAGE AND STABLE SERVICE			
262	Keeping, care and cleaning of motor vehicles		360.00
27—BOARDING AND LODGING			2,000.00
	This includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District.		
28—IMPERSONAL SERVICES, SUNDRY AND N. O. C.			
281	Public office and court service		1,000.00
28-A	Hospital and first aid services and investigation of personal injuries other than to employes		1,000.00
	(Includes cost of maps, plats, photographs, auto hire, etc.)		
29—REPAIR AND REPLACEMENT SERVICE			
29-452	Motor vehicle parts	$ 30.00	
29-5271	Motor vehicle equipment	130.00	
29-53	Furniture and office equipment	40.00	
29-555	Books, maps and charts	10.00	
29-58	Equipment, N. O. C.	10.00	
29	Total		220.00
	2—Total Contractual and Impersonal Service		**$ 11,180.00**

3—Supplies

311	Office supplies		$ 1,500.00
322	Liquid fuels and illuminants		5.00
36—ELECTRICAL, MOTOR VEHICLE SUPPLIES AND LUBRICANTS			
362	Electrical supplies	$ 5.00	
363	Lubricants	15.00	
364	Motor vehicle supplies	30.00	
36	Total		50.00
37—CLEANING AND TOILET SUPPLIES			10.00
	3—Total Supplies		**$ 1,565.00**

4—Materials and Parts for Repairs and Replacements

45—PARTS FOR REPAIRS AND REPLACEMENTS			
451	Building and cabinet making parts	$ 25.00	
452	Motor vehicle parts	200.00	
45	Total		$ 225.00
	4—Total Materials and Parts for Repairs and Replacements		**$ 225.00**

5—Equipment

51—FIXED PLANT EQUIPMENT		
516 Heating and ventilating equipment		$ 15.00
53—FURNITURE AND OFFICE EQUIPMENT		675.00
55—LABORATORY, PHOTOGRAPHIC, TESTING, ENGINEERING EQUIPMENT AND BOOKS		
555 Books, maps and charts		1,625.00
5—Total Equipment		**$ 2,315.00**

8—Fixed Charges

81—RENTS AND PAYMENTS FOR EASEMENTS AND PERMITS		$ 14.50
85—INSURANCE		
853 Automobile insurance	$ 110.00	
854 Fidelity insurance	50.00	
85 Total		160.00
8—Total Fixed Charges		**$ 174.50**
99—CONTINGENCIES		$ 3,000.00
GRAND TOTAL—DEPARTMENT OF LAW		**$ 162,669.50**

5—DEPARTMENT OF THE CLERK OF THE DISTRICT

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYEES

General Administration

Clerk's Division

Clerk of the Board, 1 at $6,800.00	$ 6,800.00
Committee Clerk, 1 at $2,400.00	2,400.00
Stenographer and Proceeding Clerk, 1 at $2,400	2,400.00
Secretary and Stenographer, 1 at $1,800.00	1,800.00
Stenographer, 1 at $1,800.00	1,800.00
Paymaster, 1 at $2,400.00	2,400.00
Assistant to Paymaster, 1 at $1,320.00	1,320.00
Vault Clerk, 1 at $1,800.00	1,800.00
Counter Clerk, 1 at $2,100.00	2,100.00
Mail and Utility Clerk, 1 at $1,200.00	1,200.00
Clerk, 1 at $1,140.00	1,140.00
Chief Telephone Operator, 1 at $1,200.00	1,200.00
Accountant (Law Department), 1 at $3,600.00	3,600.00
Superintendent of Efficiency, 1 at $2,700.00	2,700.00
	$32,660.00

Accounting and Record Division

General Accountant, 1 at $4,200.00	$ 4,200.00
Cost Record Clerk, 1 at $2,400.00	2,400.00
Disbursing Record Clerk, 1 at $1,920.00	1,920.00
Warrant and Voucher Record Clerk, 1 at $1,920	1,920.00
Budget Bookkeeper, 1 at $2,400.00	2,400.00
Budget Clerks, 2 at $1,500.00	3,000.00
Key Punch Operator and Clerk,, 1 at $1,020.00	1,020.00
Stenographer, 1 at $1,500.00	1,500.00
	$18,360.00

Purchasing Division

Purchase Order Clerk, 1 at $2,100.00	$ 2,100.00
Bookkeeper, 1 at $1,620.00	1,620.00
Clerk, 1 at $1,500.00	1,500.00
Stenographer, 1 at $1,200.00	1,200.00
	$ 6,420.00

Cashier's Division

Cashier, 1 at $1,500.00	$ 1,500.00
	$ 1,500.00

11	Total	$ 58,940.00
12—SALARIES AND WAGES OF TEMPORARY EMPLOYES		
	(For vacation periods)	500.00
13—COMPENSATION FOR PERSONAL SERVICES OTHER THAN SALARIES AND WAGES		
	Auditing of books and accounts of the Sanitary District.	5,000.00
	1—Total Personal Service	**$ 64,440.00**

2—Contractual and Impersonal Service

21—TRANSPORTATION			
211	Railroad and steamship transportation (other than local) of persons	$ 100.00	
212	Local transportation of persons	1,000.00	
213	Railroad and steamship transportation of things	35.00	
214	Drayage	10.00	
21	Total		$ 1,145.00
22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE			
221	Telegraph, cable, wireless and messenger service	$ 100.00	
222	Postage	3,000.00	

223	Telephone service	2,850.00	
2231	Contract, office and plant $2,500.00		
2232	Individual, contract or calls 350.00		
22	Total		5,950.00
23—PUBLISHING, PRINTING AND PHOTOGRAPHING			
231	Publishing proceedings of Board of Trustees	$ 6,000.00	
232	Publishing of pamphlets and books	3,200.00	
	Biennial report 1916 and 1917 $3,000.00		
	Annual appropriation bill 1919 200.00		
233	Printing, engraving and multigraphing and mimeographing	250.00	
235	Blue printing	50.00	
23	Total		9,500.00
24—ADVERTISING			5,000.00
	Advertising the appropriation bill.		
	Advertising for bids.		
	Miscellaneous advertising.		
251	Electric current		1,600.00
26—TEAMING, GARAGE AND STABLE SERVICE			
261	Hire of teams, horses and carts	$ 10.00	
262	Keeping care and cleaning of motor	5.00	
26	Total		15.00
27—BOARDING AND LODGING			450.00
	Includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District.		
28—IMPERSONAL SERVICES, SUNDRY AND N. O. C.			
281	Public office and court service	$ 5.00	
282	Towel and laundry service (main office)	350.00	
283	Water and ice service (main office)	600.00	
289	Impersonal service N. O. C.	400.00	
	Clock service $ 24.00		
	Press clippings 150.00		
	Subscription to Bradstreet 175.00		
	Miscellaneous service 51.00		
28	Total		1,355.00
29—REPAIR AND REPLACEMENT SERVICE			
29-311	Office supplies	$ 5.00	
29-53	Furniture and office equipment (repairs to linoleum, etc.)	950.00	

29-555	Books, maps and charts	25.00	
29-58	Equipment, N. O. C.	5.00	
29	Total		985.00
	2—Total Contractual and Impersonal Service		**$ 26,000.00**

3—Supplies

31—OFFICE AND DRAFTING SUPPLIES			
311	Office supplies		$ 2,500.00
32—FUEL AND ILLUMINANTS			
322	Liquid fuels and illuminants		5.00
36—MECHANICAL, PLANT AND ELECTRICAL SUPPLIES AND LUBRICANTS			
361	Mechanical and plant supplies	$ 25.00	
362	Electrical supplies	125.00	
36	Total		150.00
37—CLEANING AND TOILET SUPPLIES			10.00
38—FOOD AND HOUSEHOLD SUPPLIES			
382	Household supplies		5.00
	3—Total Supplies		**$ 2,670.00**

4—Materials and Parts for Repairs and Replacements

40—MATERIALS FOR REPAIRS AND REPLACEMENTS			
402	Metallic materials	$ 5.00	
	4023. Wire	$ 2.50	
	4026. Hardware	2.50	
406	Paints and varnishes	5.00	
40	Total		10.00
45—PARTS FOR REPAIRS AND REPLACEMENTS			
451	Building and cabinet making parts	$ 10.00	
455	Electrical parts	2.50	
459	Parts, N. O. C.	2.50	
45	Total		15.00
	4—Total Material and Parts		**$ 25.00**

5—Equipment

53—FURNITURE AND OFFICE EQUIPMENT		
	Desks and other office equipment	$ 300.00

555	Books, maps and charts	60.00
58	Equipment, N. O. C.	100.00
	5—Total Equipment	**$ 460.00**

8—Fixed Charges

81—RENTS			
812	Office rent	$ 30,312.50	
813	Equipment rents	50.00	
81	Total		$ 30,362.50
821	Interest on bonds		668,620.00
84—PAYMENT OF MATURING BONDS			1,526,000.00
854	Fidelity insurance		125.00
86—JUDGMENTS AND CLAIMS			400,000.00
89—LOSS AND COST OF COLLECTION OF TAXES YEAR 1919			465,000.00
	8—Total Fixed Charges		**$ 3,090,107.50**
99—CONTINGENCIES			$ 2,000.00
	GRAND TOTAL—DEPARTMENT OF THE CLERK OF THE DISTRICT		**$ 3,185,702.50**

6—DEPARTMENT OF THE TREASURY

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES			
	General Administration		
	Treasurer	$ 2,500.00	
	1—Total Personal Service		**$ 2,500.00**

2—Contractual and Impersonal Service

222	Postage	$ 5.00
232	Printing bond registers	100.00
289	Impersonal Service, N. O. C. (Storage of Treasurer's records)	30.00
	2—Total Contractual and Impersonal Service	**$ 135.00**

3—Supplies

311	Office supplies	$ 50.00
	3—Total Supplies	**$ 50.00**

5—Equipment

53	Furniture and office equipment		$ 15.00
	5—Total Equipment		**$ 15.00**
	GRAND TOTAL—DEPARTMENT OF THE TREASURY		**$ 2,700.00**

7—DEPARTMENT OF REAL ESTATE

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

	Manager, 1 at $3,600.00	$ 3,600.00	
	Secretary, 1 at $1,620.00	1,620.00	
	Investigator, 1 at $1,500.00	1,500.00	
11	Total		$ 6,720.00

13—COMPENSATION FOR PERSONAL SERVICES OTHER THAN SALARIES AND WAGES 5,000.00

(Real estate experts, in connection with contemplated purchase of land for account of Engineering and Electrical Department.)

1—Total Personal Service ..... $ 11,720.00

2—Contractual and Impersonal Service

21—TRANSPORTATION

211	Railroad and steamship transportation (other than local) of persons	$ 65.00	
212	Local transportation of persons	85.00	
21	Total		$ 150.00

22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE

221	Telegraph and Messenger	$ 5.00	
222	Postage	15.00	
223	Telephone service	5.00	
22	Total		25.00

24—ADVERTISING

	Advertising sites along canal for rent	200.00

28—IMPERSONAL SERVICE, SUNDRY AND N. O. C.

281	Public office and court service. (Recording documents.)	$ 75.00	
289	Impersonal service, N. O. C.	35.00	
28	Total		110.00
29-53	Repairs to furniture and office equipment		5.00
	2—Total Contractual and Impersonal Service		**$ 490.00**

3—Supplies

311	Office supplies	$ 50.00

5—Equipment

53	FURNITURE AND OFFICE EQUIPMENT	$ 25.00
555	Books, maps and charts	5.00
	5—Total Equipment	**$ 30.00**

8—Fixed Charges

83—TAXES AND SPECIAL ASSESSMENTS

831	Taxes on Sanitary District property		$ 286,203.46
	Real estate and personal property tax, Will county—		
	1915 tax (in litigation)	51,611.49	
	1916 tax (in litigation)	60,712.20	
	1917 tax (in litigation)	62,639.87	
		$174,963.56	
	Add accrued interest on above	33,889.90	
	On 1915 taxes	$15,483.47	
	On 1916 taxes	12,142.44	
	On 1917 taxes	6,263.99	
		$208,853.46	
	1918 tax	67,000.00	
	Total Will county tax	$275,853.46	
	Real and personal property tax Cook county	$ 10,000.00	
	Real and personal property tax, Du Page county	350.00	
		$286,203.46	
832	Special assessments on Sanitary District property		5,300.00
	Cook county	$ 350.00	
	Will county	4,950.00	

83	Total	291,503.46
854	Fidelity insurance	62.50
	8—Total Fixed Charges	**$ 291,565.96**
	GRAND TOTAL—DEPARTMENT OF REAL ESTATE	**$ 303,855.96**

8—DEPARTMENT OF POLICE

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

Policing

Marshal 1 at $3,000.00	$ 3,000.00	
Sergeants, 5 at $1,620.00	8,100.00	
Patrolmen (first grade), 27 at $1,500.00	40,500.00	
Patrolmen (second grade), 13 at $1,380.00	17,940.00	
NOTE—Patrolmen, for first six months' service, are to receive $1,200.00 per year; after one year's service $1,380.00 per year, and after one and one-half years' service $1,500.00 per year. Sergeants to receive $1,620.00 per year, and no man to be eligible to be a sergeant except after one and one-half years' service with the Sanitary District.		
11 Total		$ 69,540.00
12 Salaries and wages of temporary employes. For vacation periods and emergencies		6,000.00
13 Compensation for personal service (other than salaries and wages		5,000.00
1—Total Personal Service		**$ 80,540.00**

2—Contractual and Impersonal Service

21—TRANSPORTATION

211	Railroad and steamship transportation (other than local) of persons	$ 150.00	
212	Local transportation of persons	335.00	
213	Railroad and steamship transportation of things	10.00	
214	Drayage	5.00	
21	Total		$ 500.00

22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE

221	Telegraph and messenger service	$ 5.00

222	Postage	5.00	
223	Telephone service	190.00	
2231	Contract, office and plant	$ 60.00	
2232	Individual, contract or calls	130.00	
22	Total		200.00
233	Printing, engraving, multigraphing and mimeographing		10.00
263	Stable service, including subsistance of animals and keeping care of horse-drawn vehicles		25.00
27	Boarding and lodging, officers doing special duty		50.00
289	Impersonal services, N. O. C.		25.00
	29—REPAIR AND REPLACEMENT SERVICE		
29-5271	For motor vehicle equipment	$ 50.00	
29-5272	For vehicle equipment (not power driven)	50.00	
29-5273	For floating equipment	75.00	
29-53	For furniture and office equipment	5.00	
29	Total		180.00
	2—Total Contractual and Impersonal Service		**$ 990.00**

3—Supplies

311	Office supplies (for letterheads, forms, etc.)		$ 60.00
321	Coal, coke, charcoal and wood		125.00
	33—FORAGE AND OTHER SUPPLIES FOR ANIMALS		
331	Forage	$ 270.00	
332	Bedding and other supplies for animals	30.00	
33	Total		300.00
	36—MECHANICAL, PLANT AND ELECTRICAL SUPPLIES AND LUBRICANTS		
362	Electrical supplies	$ 10.00	
364	Motor vehicle and motor boat supplies	20.00	
36	Total		30.00
	39—SUPPLIES, N. O. C.		10.00
	3—Total Supplies		**$ 525.00**

4—Materials and Parts for Repairs and Replacements

406	Paints, varnishes, glass, saps, gums and dyes		$ 15.00
	45—PARTS FOR REPAIRS AND REPLACEMENTS		
451	Building and cabinet making parts	$ 5.00	

452	Motor vehicle and motor parts	100.00	
455	Electrical parts	10.00	
45	Total		$ 115.00
	4—Total Materials and Parts for Repairs and Replacements		**$ 130.00**

5—Equipment

516	Heating and ventilating equipment		$ 15.00
52—PORTABLE PLANT EQUIPMENT			
527	Transporting and conveying equipment—		
5272	For purchase of new light wagon for use at Sag	$ 200.00	
5273	For purchase of new motor boat	2,500.00	
52	Total		2,700.00
53—FURNITURE AND EQUIPMENT			20.00
57—UNIFORMS, WEARING APPAREL AND OTHER PERSONAL EQUIPMENT			75.00
58—EQUIPMENT, N. O. C.			40.00
	5—Total Equipment		**$ 2,850.00**

8—Fixed Charges

81—RENTS AND PERMITS			
812	Office and structure rents	$ 10.00	
815	Fees for permits	10.00	
81	Total		$ 20.00
85—INSURANCE			
852	Marine Insurance		75.00
	8—Total Fixed Charges		**$ 95.00**
99—CONTINGENCIES			5,000.00
	GRAND TOTAL — DEPARTMENT OF POLICE		**$ 90,130.00**

9—BOARD OF TRUSTEES

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

President of the Board, 1 at $7,500.00 ..... $ 7,500.00

	Trustees, 8 at $5,000.00	40,000.00	
	Secretary to President, 1 at $3,500.00	3,500.00	
	1—Total Personal Service		**$ 51,000.00**

2—Contractual and Impersonal Service

21—TRANSPORTATION			
211	Railroad and steamship transportation (other than local) of persons	$ 3,500.00	
212	Local transportation of persons	200.00	
213	Railroad and steamship transportation of things	10.00	
214	Drayage	10.00	
21	Total		$ 3,720.00
22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE			
221	Telegraph, cable, wireless and messenger service	$ 40.00	
223	Telephone service	160.00	
2231	Contract, office	$145.00	
2232	Inidvidual, contract or calls	15.00	
22	Total		$ 200.00
233	Printing and engraving		25.00
262	Keeping, care and cleaning of motor vehicles		10.00
27—BOARDING AND LODGING			
	Expense on business trips		4,500.00
29—REPAIR AND REPLACEMENT SERVICE			
29-5271	For motor vehicle equipment	$ 50.00	
29-53	For furniture and office equipment	50.00	
29	Total		$ 100.00
	2—Total Contractual and Impersonal Service		**$ 8,555.00**

3—Supplies

311	Office supplies	$ 650.00	
322	Liquid fuels and illuminants	50.00	
364	Motor vehicles supplies	5.00	
	3—Total Supplies		**$ 705.00**

4—Materials and Parts for Repairs and Replacements

406	Glass for desk tops	$ 50.00
45—PARTS		

451	Building and cabinet making parts	$ 5.00	
452	Motor vehicle and motor boat parts	10.00	
45	Total		$ 15.00
	4—Total Materials and Parts for Repairs and Replacements		**$ 65.00**

5—Equipment

53—FURNITURE AND OFFICE EQUIPMENT

	Furniture and fixtures	$ 650.00	
	Office equipment	50.00	
	Carpets for trustees rooms	600.00	
53	Total		$ 1,300.00
58—EQUIPMENT, N. O. C.			$ 25.00
	5—Total Equipment		**$ 1,325.00**

99—CONTINGENCIES

Contingent fund for contingent and other expense for corporate purposes not otherwise provided for, to be expended under the direction of the Committee on Finance..... $ 10,000.00

GRAND TOTAL—BOARD OF TRUSTEES.. $ 71,650.00

12—DEPARTMENT OF ELECTRICITY

1—Personal Service

11—SALARIES AND WAGES OF REGULAR EMPLOYES

General Administration

Executive Division

Electrical Engineer, 1 at $6,000.00	6,000.00
Stenographer, 1 at $1,500.00	1,500.00
	$ 7,500.00

Accounting and Stores

Accounting Division

Auditor, 1 at $3,000.00	$ 3,000.00
Chief Clerk, 1 at $2,100.00	2,100.00
Bookkeeper, 1 at $1,800.00	1,800.00
Accounts Clerk, 1 at $1,800.00	1,800.00
Materials and Supplies Clerk, 1 at $1,620.00	1,620.00
Record Clerk, 1 at $1,680.00	1,680.00

Ledger Clerks, 2 at $1,500.00	3,000.00
Stock Clerk, 1 at $1,500.00	1,500.00
File Clerk, 1 at $1,500.00	1,500.00
Voucher Clerk, 1 at $1,500.00	1,500.00
General Clerks, 8 at $1,500.00	12,000.00
Stenographer, 1 at $1,500.00	1,500.00
Office Assistant, 1 at $900.00	900.00
Messenger, 1 at $720.00	720.00
Clerk of Blue Island Office, 1 at $900.00	900.00
	$ 35,520.00

Stores Division

Storekeeper, 1 at $1,800.00	$ 1,800.00
Storeroom Clerk, 1 at $1,500.00	1,500.00
Material and Tool Clerk, 1 at $1,500.00	1,500.00
Warehousemen, 2 at $1,200.00	2,400.00
Watchmen, 2 at $1,152.00	2,304.00
	$ 9,504.00

Building and Grounds

Architectural Division

Architect, 1 at $3,600.00	$ 3,600.00
Inspector, 1 at $2,100.00	2,100.00
Draftsman, 1 at $1,800.00	1,800.00
Carpenter (at union scale)	2,000.00
Painter (at union scale)	1,875.00
Plumber (at union scale)	1,750.00
	$ 13,125.00

Engineering, Inspection and Records

Engineering Division

Chief Draftsman, 1 at $2,400.00	$ 2,400.00
Draftsman, 1 at $2,100.00	2,100.00
Record Clerk, 1 at $1,620.00	1,620.00
Inspector and Appraiser, 1 at $1,800.00	1,800.00
	$ 7,920.00

Sale of Power

Contract Division

Contract Agent, 1 at $2,400.00	$ 2,400.00
Inspector, 1 at $2,100.00	2,100.00
	$ 4,500.00

Operating, Maintenance and Construction

Operating Division

General

Operating Engineer, 1 at $3,600.00	$ 3,600.00
Assistant Operating Engineer, 1 at $2,880.00	2,880.00
Load Dispatchers, 4 at $2,160.00	8,640.00
Time, Material and Order Clerk, 1 at $1,500.00	1,500.00
Draftsman, 1 at $1,500.00	1,500.00
Stenographer, 1 at $1,500.00	1,500.00
Telephone Operator, 1 at $1,020.00	1,020.00
Janitor and Messenger, 1 at $1,200.00	1,200.00
General Sub-Station Operator, 1 at $1,740.00	1,740.00
Relief Sub-Station Operators, 2 at $1,740.00	3,480.00
Relief Sub-Station Operators, 3 at $1,500.00	4,500.00
Record Clerk, 1 at $1,500.00	1,500.00
Vault and File Clerk, 1 at $1,200.00	1,200.00
Laborer Foreman, 1	1,500.00
Laborers, 6 to 12	15,000.00
	$ 50,760.00

Power House

Superintendent, 1 at $3,000.00	$ 3,000.00
Chief Operator, 1 at $2,280.00	2,280.00
Operators, 4 at $2,160.00	8,640.00
Assistant Operators, 3 at $1,740.00	5,220.00
Dynamo Tenders, 4 at $1,500.00	6,000.00
Oilers, 5 at $1,500.00	7,500.00
Machinists, 2 (at union scale)	3,480.00
Maintenance Men, 2 at $1,860.00	3,720.00
Clerk, 1 at $1,500.00	1,500.00
Laborer Foreman, 1	1,980.00
Laborers, 6 to 12	15,000.00
	$ 58,320.00

Stations

Terminal Station

Operators, 4 at $1,860.00	$ 7,440.00
Floor Operators, 3 at $1,740.00	5,220.00
Janitors, 2 at $1,152.00	2,304.00
	$ 14,964.00

H. N. May Generating Plant

Engineer and Repairman, 1 at $1,860.00	$ 1,860.00
Engineers (3 months), 2 at $1,680.00	840.00
Firemen (3 months), 2	720.00
Firemen Helpers (3 months), 4	1,296.00

Coal and Ash Handlers (3 months), 4.....		1,296.00
Oilers (3 months), 4.....		1,296.00
Operators (3 months), 2 at $1,740.00.....		870.00
		$ 8,178.00

Sub-Stations

City Hall Sub-Station

Chief Operator, 1 at $2,160.00.....	$	2,160.00
Operators, 3 at $1,740.00.....		5,220.00
	$	7,380.00

Wilmette Pumping Station

Operators, 4 at $1,500.00.....	$	6,000.00
Janitor and Lock Tender, 1 at $1,200.00.....		1,200.00
	$	7,200.00

H. N. May Sub-Station

Operators (9 months), 3 at $1,500.00.....	$	3,375.00

Ashland Avenue Sub-Station

Operators, 3 at $1,500.00.....	$	4,500.00

Leavitt Street Sub-Station

Operators, 3 at $1,500.00.....	$	4,500.00

West Twelfth Street Sub-Station

Operators, 3 at $1,500.00.....	$	4,500.00

Blue Island Sub-Station

Operators, 3 at $1,500.00.....	$	4,500.00

Forest Park Sub-Station

Operators, 3 at $1,500.00.....	$	4,500.00

Berwyn Sub-Station

Chief Operator, 1 at $420.00.....		420.00
Operators, 2 at $300.00.....		600.00
(Covers the Sanitary District's portion of expense of operating the Berwyn Sub-station.)		
	$	1,020.00
Total substations	$	41,475.00

Overhead Maintenance and Construction Division

Superintendent Overhead Lines, 1 at $2,700.00	$ 2,700.00
General Foreman Overhead Lines, 1 at $2,700.00	2,700.00
Overhead Line Foremen, 4 at $2,280.00	9,120.00
Linemen, 12 at $1,980.00	23,760.00
Groundmen, 5 at $1,380.00	6,900.00
	$ 45,180.00

Underground Maintenance and Construction Division

Superintendent Underground Lines, 1 at union scale	$ 2,700.00
Cable Splicers, 3 at union scale	6,840.00
Cable Splicers Helpers, 4 at union scale	7,680.00
	$ 17,220.00

Inside Maintenance and Construction Division

Foreman, 1 at $2,280.00	$ 2,280.00
Repairmen, 5 at $1,860.00	9,300.00
Assistant Repairmen, 3 at $1,560.00	4,680.00
	$ 16,260.00

Meter Division

Superintendent of Meters, 1 at $2,580.00	$ 2,580.00
Chief Inspector, 1 at $1,980.00	1,980.00
Meter Inspectors, 4 at $1,680.00	6,720.00
Meter Inspector's Helpers, 2 at $1,380.00	2,760.00
	$ 14,040.00

Testing Division

Testing Engineer, 1 at $2,580.00	$ 2,580.00
Chief Electrician, 1 at $1,980.00	1,980.00
Electricians, 5 at $1,860.00	9,300.00
Electrician's Helpers, 2 at $1,560.00	3,120.00
	$ 16,980.00

Utility Equipment Division

Supt. Utility Equipment, 1 at $2,100.00	$ 2,100.00
Machinists, 2 at union scale	3,240.00
Captain "Robert R," 1 at $1,800.00	1,800.00
Pilot "Robert R," 1 at $1,800.00	1,800.00
Engineer "Robert R," 1 at $1,800.00	1,800.00
Deckhand "Robert R," 1 at $1,380.00	1,380.00
Engineer "Thomas A," 1 at $1,500.00	1,500.00

	Chauffeurs, 7 at $1,500.00	10,500.00	
	Washers, 3 at $1,152,00	3,456.00	
		$ 27,576.00	
11	Total		$ 389,022.00
12—SALARIES AND WAGES OF TEMPORARY EMPLOYES			
	Executive Division		
	Stenographer, account of vacation period	$ 50.00	
	Accounting Division		
	Clerk, account of vacation period	250.00	
	Stores Division		
	Clerk, account of vacation period	225.00	
	Architectural Division		
	Services of extra draftsman	1,500.00	
	Engineering Division		
	Account vacation period and extra draftsman	500.00	
	Operating Division		
	Account of vacation period	9,480.00	
	Thirty-ninth street generating station	$1,300.00	
	Miscellaneous operators	6,000.00	
	Fireman at Western avenue (winter months)	2,180.00	
	Overhead maintenance and construction division	48,240.00	
	Underground maintenance and construction division	26,400.00	
	Inside maintenance and construction division	7,500.00	
	Meter division	500.00	
	Testing division	500.00	
	Utility equipment division	1,000.00	
	Power house	5,000.00	
12	Total		$ 101,145.00
13—COMPENSATION FOR PERSONAL SERVICES OTHER THAN SALARIES AND WAGES			
	Auditing of books and accounts	$ 1,500.00	
	Miscellaneous	500.00	
13	Total		2,000.00
14—AWARDS AND EMPLOYES' CLAIMS (WORKMEN'S COMPENSATION)			
141	Compensation for injury and death	$ 20,000.00	

142	Allowance account employes injured	4,000.00	
143	Medical and hospital service	3,000.00	
14	Total		27,000.00
	1—Total Personal Service		**$519,167.00**

2—Contractual and Impersonal Service

21—TRANSPORTATION			
211	Railroad and steamship transportation (other than local) of persons	$ 500.00	
212	Local transportation of persons	1,000.00	
213	Railroad and steamship transportation of things	2,000.00	
214	Drayage	250.00	
21	Total		$ 3,750.00
22—TRANSMISSION OF MESSAGES BY TELEGRAPH, MESSENGER, POSTAGE AND TELEPHONE			
221	Telegraph and messenger service	$ 50.00	
222	Postage	1,500.00	
223	Telephone service	7,500.00	
2231	Contract, office and plant	$5,000.00	
2232	Individual contract or calls	2,500.00	
22	Total		9,050.00
23—PUBLISHING, PRINTING AND PHOTOGRAPHING			
232	Publishing of pamphlets and books	$ 500.00	
233	Printing, engraving, multigraphing and mimeographing	500.00	
235	Blue printing	50.00	
23	Total		1,050.00
24—ADVERTISING			100.00
25—LIGHT, HEAT, POWER AND WATER SERVICE			
251	Electric current	$ 17,430.42	
254	Water (delivered through pipes)	250.00	
25	Total		17,680.42
26—TEAMING, GARAGE AND STABLE SERVICE			
261	Hire of teams, horses and carts	$ 3,000.00	
262	Keeping, care and cleaning of motor vehicles	1,000.00	
26	Total		4,000.00
27—BOARDING AND LODGING			3,000.00

Includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District.

28—PERSONAL SERVICE, SUNDRY AND N. O. C.

281	Public office and court service	$ 100.00	
282	Towel and laundry service	200.00	
283	Water and ice service	1,000.00	
284	Testing service	50.00	
286	Hospital service for other than employes	500.00	
289	Impersonal service, N. O. C.	3,000.00	
28	Total		4,850.00

29—REPAIR AND REPLACEMENT SERVICE

Includes repairs and replacements by contract or open market order necessary to keep structures, machinery, equipment, apparatus, transmission and distribution lines and other property in good operating condition, and which do not add to the value of fixed assets.

29-451	Building and cabinet making parts	$ 25.00	
29-452	Motor vehicle and motor boat parts	600.00	
29-454	Engine and machine parts	200.00	
29-455	Electrical parts	85.00	
29-456	Valve and valve parts	35.00	
29-511	Prime movers, pumping and steam plant equipment	900.00	
29-512	Machine and machine shop equipment	35.00	
29-515	Commercial lighting and power equipment	15.00	
29-516	Heating and ventilating equipment	160.00	
29-518	Electrical equipment	5,500.00	
29-525	Digging and agricultural implements	5.00	
29-526	Tools	50.00	
29-5271	Motor vehicle equipment	800.00	
29-5272	Vehicle equipment not power driven	70.00	
29-5273	Floating equipment	250.00	
29-529	Portable plant equipment N. O. C.	15.00	
29-53	Furniture and office and household equipment	60.00	
29-57	Uniforms and wearing apparel	60.00	
29-58	Equipment N. O. C.	85.00	
29-61	Buildings	250.00	
29-66	Pavements, sidewalks and railroad track, works and trestles	800.00	
29	Total		10,000.00
	2—Total Contractual and Impersonal Service		**$ 53,480.42**

3—Supplies

31—OFFICE AND DRAFTING SUPPLIES

311	Office supplies	$ 4,000.00	
312	Drafting supplies	250.00	
31	Total		$ 4,250.00

32—FUEL AND ILLUMINANTS			
321	Coal, coke, charcoal and wood	$ 10,000.00	
322	Liquid fuels and illuminants	10,000.00	
323	Gas fuel	50.00	
324	Candles, tapers and matches	20.00	
32	Total		20,070.00
34—CHEMICALS, LABORATORY, FIRST AID AND PHOTOGRAPHIC SUPPLIES			
341	Chemicals and laboratory supplies	$ 500.00	
342	First aid supplies	50.00	
34	Total		550.00
35—EXPLOSIVES			100.00
36—MECHANICAL PLANT AND ELECTRICAL SUPPLIES AND LUBRICANTS			
362	Electrical supplies	$ 5,000.00	
361	Mechanical and plant supplies	6,000.00	
363	Lubricants	3,500.00	
364	Motor vehicle and motor boat supplies	500.00	
36	Total		15,000.00
37—CLEANING AND TOILET SUPPLIES			1,500.00
38—FOOD AND HOUSEHOLD SUPPLIES			
381	Food supplies	$ 150.00	
382	Household supplies	50.00	
38	Total		200.00
39—SUPPLIES, N. O. C.			100.00
	3—Total Supplies		**$ 41,770.00**

4—Materials and Parts

40—MATERIALS			
401	Raw materials	$ 1,000.00	
402	Metalic materials	619,900.00	
4021	Metal in pigs and scrap	$ 2,500.00	
4022	Mill metals, structural iron and steel	2,500.00	
4023	Cable and wire	606,800.00	
4024	Chain	100.00	
4025	Pipe and pipe fittings	3,000.00	
4026	Hardware	5,000.00	
403	Building and street surfacing materials	2,000.00	
404	Lumber	36,000.00	
405	Fibre products and insulation materials	2,000.00	
406	Paints, varnishes, glass, saps, gums and dyes	2,500.00	

407	Leather products	500.00	
408	Conduit and conduit fittings	3,000.00	
40	Total		$ 666,900.00
45—PARTS			
451	Building and cabinet making parts	$ 1,000.00	
452	Motor vehicles and motor boat parts	7,500.00	
453	Castings and forgings	5,000.00	
454	Engine and machine and protection attachments	31,800.00	
455	Electrical parts	35,000.00	
456	Valves and valve parts	500.00	
459	Parts, N. O. C.	1,000.00	
45	Total		81,800.00
	4—Total Materials and Parts		**$ 748,700.00**

5—Equipment

51—FIXED PLANT EQUIPMENT			
511	Prime movers, pumping and steam plant equipment	$ 3,000.00	
512	Machine and machine shop equipment	750.00	
513	Street lamps and fixtures	100.00	
514	Telephone and telegraph equipment	250.00	
515	Commercial lighting and power equipment	25,000.00	
516	Heating and ventilating equipment	500.00	
517	Lifting equipment	500.00	
518	Electrical equipment	77,100.00	
519	Fixed plant equipment	1,000.00	
51	Total		$ 108,200.00
52—PORTABLE PLANT EQUIPMENT			
522	Dragging nad hoisting equipment	$ 500.00	
525	Digging and agricultural implements	250.00	
526	Tools	1,000.00	
527	Transportation and conveying equipment	6,500.00	
5271	Motor vehicle equipment	$5,000.00	
5272	Vehicle equipment, not power driven	500.00	
5273	Floating equipment	1,000.00	
52	Total		8,250.00
53—FURNITURE AND OFFICE AND HOUSEHOLD EQUIPMENT			500.00
54—EQUIPMENT FOR PRESERVING LIFE AND PROPERTY			
541	Fire prevention and fire fighting equipment	$ 100.00	
542	Life saving equipment	150.00	
54	Total		250.00

55—LABORATORY, PHOTOGRAPHIC, TESTING, ENGINEERING EQUIPMENT AND BOOKS

551	Laboratory equipment	$ 50.00	
553	Testing equipment	500.00	
554	Engineering and drafting equipment	50.00	
555	Books, maps and charts	50.00	
55	Total		650.00
56—GARAGE AND STABLE EQUIPMENT			150.00
57—UNIFORMS, WEARING APPAREL AND OTHER PERSONAL EQUIPMENT			750.00
58—EQUIPMENT, N. O. C.			2,000.00
5—Total Equipment			**$ 120,750.00**

6—Structures and Non-Structural Improvements

61—BUILDINGS	$	5,000.00
66—PAVEMENTS AND SIDEWALKS		500.00
67—CIRCUITS FOR CONDUIT LINES		233,815.00
68—HORTICULTURAL AND LANDSCAPE IMPROVEMENTS		200.00
6—Total Structures and Non-Structural Improvements	**$**	**239,515.00**

8—Fixed Charges

81—RENTS AND PAYMENTS FOR EASEMENTS AND PERMITS

811	Land rents	$ 100.00	
812	Office and structure rents	500.00	
813	Equipment rents	750.00	
815	Fees and permits	400.00	
81	Total		$ 1,750.00
85—INSURANCE			
851	Fire insurance	$ 500.00	
852	Marine insurance	250.00	
853	Automobile insurance	1,500.00	
85	Total		2,250.00
86—JUDGMENTS, CLAIMS AND REFUNDS			5,000.00
8—Total Fixed Charges			**$ 9,000.00**

9—Custom Work and Contingencies

91—CUSTOM WORK			
	City of Chicago	$145,000.00	
	All other custom work	5,000.00	
91	Total		$ 150,000.00
	(Not to be paid out of any tax levied by The Sanitary District of Chicago.)		
99—CONTINGENCIES			50,000.00
	9—Total Custom Work and Contingencies		**$ 200,000.00**
	GRAND TOTAL—DEPARTMENT OF ELECTRICITY		**$ 1,932,382.42**

RECAPITULATION

Department Totals

Engineering	$9,614,822.86
Illinois and Michigan Canal and Illinois River Conditions	35,976.00
Law	162,669.50
Clerk of the District	3,185,702.50
Treasury	2,700.00
Real Estate	303,855.96
Police	90,130.00
Board of Trustees	71,650.00
Electricity	1,932,382.42

GRAND TOTAL—APPROPRIATIONS FOR CORPORATE PURPOSES OF THE SANITARY DISTRICT OF CHICAGO FOR FISCAL YEAR 1919 ..... $15,399,889.24

SECTION 3. The appropriation herein of the amounts for the payments of contract liabilities, or to defray the expense of any project or purpose, shall not be construed as an approval by this Board of any of said contract liabilities, or of any project or purpose mentioned herein, but shall be regarded only as the provision of a fund, or funds, for the payment thereof when said contract liabilities have been found to be valid and legal obligations against The Sanitary District of Chicago, and when properly vouchered, audited and approved by the Board of Trustees, or when any project or purpose is approved and authorized by the Board of Trustees of The Sanitary District of Chicago, as the case may be.

SECTION 4. This ordinance shall take effect and be in full force from and after its passage and publication in accordance with the law.

Approved as to Form:

C. ARCH WILLIAMS,
Attorney.

Mr. Sergel moved that item under "Engineering Department," and subdivision entitled "Outlets and Intercepting Sewers, Tunnels and Plants to Remove Solids and other Refuse from Sewage," "65M2059, Stockyards Intercepting Sewer, $250,000.00," on page 124 of the Proceedings, be stricken out.

On roll call the motion was lost by the following vote:

Yeas—Mr. Sergel—One.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Mr. Sergel moved that item under "Engineering Department," and subdivision entitled "Outlets and Intercepting Sewers, Tunnels and Plants to Remove Solids and other Refuse from Sewage," "65J162. Stockyards Activated Sludge Plant, $300,000.00," on page 125 of the Proceedings, be stricken out.

On roll call the motion was lost by the following vote:

Yeas—Mr. Sergel—One.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Mr. Sergel moved that item under "Engineering Department" and subdivision entitled "Acquirement of Land," "75, Stockyards Activated Sludge Plant Site, $400,000.00," on page 125 of the Proceedings, be stricken out.

On roll call the motion was lost by the following vote:

Yeas—Mr. Sergel—One.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Mr. Nance moved that item under "Department of Law" entitled "11, Salaries and wages of regular employes, $89,760.00," on page 131 of the Proceedings, be reduced twenty per cent, and that the remainder be apportioned according to plans to be formulated by the head of the Law Department.

Mr. Sergel: I arise to a point of order. That motion, if passed, will violate the rules of the Board in reference to the Committee on Employment. The rules provide that the Employment Committee shall fix the compensation of employes, and while I do not think that the rule in regard to the Employment Committee is legal, still it is the rule of the Board, and I think on that account that Trustee Nance's motion is out of order.

The Chairman: The Chair sustains the point of order.

Mr. Nance: I appeal from the decision of the Chair.

On roll call the decision of the Chair was sustained by the following vote:

Yeas—Messrs. Sergel, Carr Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Mr. Nance—One.

Mr. Sergel moved that item under "Department of Law" entitled "11, Salaries and wages of regular employes, $89,760.00," on page 131 of the Proceedings, be amended by striking out "Assistant Attorneys, 3 at $4,800.00, $14,400.00," and substituting in lieu thereof "Assistant Attorney, 1 at $4,800.00, $4,800.00," and by striking out "Assistant Attorneys, 4 at $3,000.00, $12,000.00," and substituting in lieu thereof "Assistant Attorneys, 3 at $3,000.00, $9,000.00," making a total of $77,160.00 instead of $89,760.00."

On roll call the motion was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller and Paullin—Six.

Mr. Nance moved that item 13, "Compensation for personal service, other than salaries and wages," under "Department of Law," on page 132 of the Proceedings, be amended by striking out the following item: "Special representative at Washington, D. C., pertaining to Federal matters, $2,100.00."

On roll call the motion was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller and Paullin—Six.

Mr. Nance moved that item 99, "Contingencies, $3,000.00," under "Department of Law," on page 134 of the Proceedings, be stricken out.

On roll call the motion was lost by the following vote:

Yeas—Mr. Nance—One.

Nays—Messrs. Carr, Healy Lawley, Littler, Mueller and Paullin—Six.

Mr. Nance moved that item under "Department of Real Estate," entitled "13, Compensation for personal services other than salaries and wages; Real Estate Experts, in connection with contemplated purchase of land for account of Engineering and Electrical Department, $5,000.00," on page 139 of the Proceedings, be reduced to $2,500.00.

On roll call the motion was lost by the following vote:

Yeas—Mr. Nance—One.

Nays—Messrs. Carr, Healy, Lawley, Littler and Mueller—Five.

Mr. Nance moved that item under "Department of Police," "11, Salaries and wages of regular employes, $69,540.00," page 141 of the Proceedings, be reduced twenty per cent.

The Chairman ruled that the motion was out of order.

Mr. Nance moved that the item under "Department of Police" entitled "12, Salaries and wages of temporary employes. For vacation periods and emergencies, $6,000.00," on page 141 of the Proceedings, be reduced to $4,000.00.

On roll call the motion was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Healy, Lawley, Littler, Mueller and Paullin—Six.

Mr. Nance moved that the item under "Department of Police" entitled "13, Compensation for personal services other than salaries and wages, $5,000.00," on page 141 of the Proceedings, be stricken out.

On roll call the motion was lost by the following vote:

Yeas—Mr. Nance—One.

Nays—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Mr. Lawley moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel (except as to certain items hereinbefore specifically referred to on which he voted "nay"), Carr, Healy, Lawley, Littler, Mueller, Nance (except as to certain items hereinbefore specifically referred to, on which he voted "nay") and Paullin—Six (on all items, and eight on all items not excepted).

Nays—None (except as above stated).

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillen,

Clerk.

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C438

APR 12 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO

REGULAR MEETING

THURSDAY, FEBRUARY 13, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Clark—One.

REPORTS OF OFFICERS.

The Clerk presented his report of money received and deposited with the Treasurer during the month of January, 1919, which was ordered published and filed, as follows:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of One Hundred Forty-two Thousand, One Hundred Ninety-five and Ninety-one Hundredths ($142,195.91) Dollars, during the month of January, 1919, from the following sources:

Continental & Commercial National Bank, through George M. Reynolds, Treasurer, being interest on $41,000.00 of Sanitary District bonds of the 31st issue, dated July 1, 1918, unsold and in his hands at 4½% interest from July 1, 1918, to January 1, 1919		$ 922.50
Chicago & Alton R. R. Company, being annual rental for water service under lease No. 252, dated September 26, 1911, for period covering year 1919		575.00
George M. Reynolds, Treasurer, being proceeds from 40 coupons clipped from 40 Berwyn electric light bonds, dated October 1, 1915, and coupons maturing February 1, 1919,		
40 coupons at $6.25 each	$ 250.00	
Less collection charges	.35	
		249.65
Moore, Case, Lyman & Hubbard, being refund on policy No. AP-56138 on Packard car		86.08
American Steel & Wire Company, being annual rental for years 1918 and 1919 for pipe line service to Rockdale, under lease dated January 15, 1914		70.00
Nessen Warehousing Company, being annual rental for land under lease dated November 28, 1906, for period covering from June 30, 1918, to June 30, 1919		5,162.50
International Harvester Company, being semi-annual rental for land under leases dated June 18, 1902, and July 18, 1902, for period covering from January 1 to June 30, 1919		4,500.00
Buchanan-Daley Company, being semi-annual rental of land under leases dated January 9, 1913, July 14, 1909, and June 24, 1908, for period covering from January 1, 1919, to June 30, 1919		415.27
Corn Products Refining Company, being annual rental of land under lease dated February 19, 1908, for period covering from June 30, 1918, to June 30, 1919		1,752.50
Chicago Transfer & Clearing Company, being semi-annual rental for land under lease dated January 13, 1909, for period covering from January 1 to June 30, 1919		414.38
Thomas Le Grand, being balance of annual rental for land under lease dated April 9, 1914, for year 1918—total rental	$ 350.00	
Paid on account December 28, 1917	50.00	
		300.00
Van Fleet Woodworking Company, being monthly rental for premises located at No. 1 Jefferson street, Joliet, Ill., for month of February, 1918		75.00
City of Chicago, being monthly rental of land under lease No. 306, and		
Amount carried forward		$ 14,522,88

Amount brought forward		$ 14,522.88
agreement dated February 28, 1918, for months of November and December, 1918		250.00
Alex P. Karres, being monthly rental for premises at No. 1026 Central street, Evanston, Ill., dated June 11, 1914, for the month of July, 1918		40.00
Sundry consumers, for electric light and power	$ 50,691.37	
City of Chicago, for power and light from December, 1917, to December, 1918	65,566.64	
South Park Commissioners, for power and light for month of November, 1918	2,853.94	
Commissioners of Lincoln Park—		
For power and light for November, 1918	$1,439.02	
Interest and depreciation for November, 1918	69.45	
	1,508.47	
Village of Maywood—		
For power and light for November, 1918	$1,061.75	
Interest and depreciation for November, 1918	89.30	
	1,151.05	
State of Illinois, for power and light for November and December, 1918	1,014.00	
Village of Dolton—		
For power and light for November, 1918	$ 537.60	
Interest and depreciation for November, 1918	18.65	
	556.25	
Town of Cicero, for power and light for November, 1918	499.80	
City of Berwyn—		
For power and light for October, November and December, 1918	$ 412.47	
Interest and depreciation for October, November and December, 1918	54.34	
	466.81	
Village of South Holland—		
For power and light for Ocotber, 1918	$ 418.22	
Interest and depreciation for October, 1918	21.69	
	439.91	
Village of Summit—		
For power and light for November, 1918	$ 293.16	
Interest and depreciation for November, 1918	32.98	
	326.14	
Village of Evergreen Park—		
For power and light for November, 1918	$ 202.19	
Interest and depreciation for November, 1918	26.87	
	229.06	
City of Blue Island—		
For power and light for November, 1918	$ 98.32	
Interest and depreciation for November, 1918	90.78	
	189.10	
Cook County—		
For power and light for July, August, Septem-		
Amounts carried forward	$125,492.54	$ 14,812.88

Amounts brought forward		$125,492.54	$ 14,812.88
ber and October, 1918	$ 77.99		
Interest and depreciation for August, September and October, 1918	75.00		
		152.99	
Village of Wilmette, for power and light for November, 1918		126.90	
U. S. War Camp Community, for power and light for November, 1918		73.20	
Village of Stickney, for power and light for November, 1918		16.12	
U. S. Railroad Administration, purchase of lime, etc.		925.00	
City of Chicago—			
Purchase of 1 contact	$ 11.67		
Purchase of 41 coils	255.00		
		266.67	
Forest Park Amusement Company, cost of replacing cross-arms, pins, etc.		183.08	
National Malleable Casting Company, purchase of electrical equipment		100.00	
The Texas Company, return of empty barrels		34.80	
Riverside Lime & Stone Company, cost of collecting bill at Lyons, Ill.		4.38	
James J. Finneran, personal telephone calls		4.05	
Sterling Drop Forge Company, cost of poles, cross-arms, etc.		2.50	
Isabella Ward, for personal telegraph message		.60	
J. T. Hawley, for personal telephone calls		.20	
			127,383.03
Grand Total			$142,195.91

Respectfully submitted,

JOHN MCGILLEN,
Clerk of the District.

CHICAGO, February 13, 1919.

$142,195.91.

Received from John McGillen, Clerk, the sum of One Hundred Forty-two Thousand, One Hundred Ninety-five and Ninety-one Hundredths ($142,195.91) Dollars, on the dates and in amounts, as follows:

January 2	$ 751.38
January 3	1,603.14
January 4	4,881.35
January 6	109.94
January 7	1,226.03
January 8	601.80
January 9	544.54
January 10	882.39
January 11	2,642.28
January 13	6,733.10
January 14	3,285.04
January 15	1,490.45
January 16	7,777.53
January 17	4,022.23
January 18	3,478.35
January 20	8,842.89

January 21	8,569.51
January 22	6,696.60
January 23	2,440.14
January 24	255.65
January 25	174.56
January 27	77.28
January 28	1,762.19
January 29	155.31
January 30	67,287.51
January 31	5,904.72
Total	$142,195.91

to be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

Electrical Department	$127,383.03
Land Revenue	12,909.65
Interest and Premium of Bonds	922.50
Water Service	645.00
Interest on Deposits	249.65
Miscellaneous Structures, etc., and Equipment, Maintenance and Operation	86.08
Total	$142,195.91

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The President presented the following message:

To the Honorable, the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I return herewith without my approval the following items in the Annual Appropriation Bill:

65M2059. Stockyards Intercepting Sewer—$250,000.

65J162. Stockyards Activated Sludge Plant—$300,000.

76. Stockyards Activated Sludge Plant Site—$400,000.

These items, aggregating $950,000, are intended as first expenditures for an Activated Sludge Plant, and for the nesessary land and intercepting sewer, the whole to constitute a plant for the treatment of stockyards trade wastes and a comparatively small amount of human sewage. For many years the Sanitary Board has been negotiating with the Stockyards companies to induce them to stop the polluting of the river and the canal by the trade waste coming from the packing houses. For nine years the Board has conducted an experimental plant and proved conclusively that the pollution can be stopped by activated sludge treatment. Finally the majority of the Trustees offered to divide the costs of treatment of the trade waste and sewage by assuming about thirteen per cent of the expense, to the Stockyards companies' eighty-seven percent. The answer of the packers was an offer to assume forty percent of the financial burden if the Sanitary District would pay sixty percent. There the matter stands, and yet the Board now appropriates $950,000 without any agreement whatever.

The engineers have estimated the cost of the treatment plant at about $4,000,000. The packers propose to saddle on the people sixty percent of this sum, $2,400,000. The amount of human sewage is insignificant compared with the volume of trade waste, and if the packers will do what other property owners do, connect their buildings with the public sewers in the surrounding streets, the human sewage will be taken care of by the Sanitary District. Objection has been made to this plan on the ground of expense to the packers. Certainly whatever the cost

of sewer connections may be, it will be no greater proportionately than other property owners must pay. The mere fact that the packers prefer to empty the human sewage into their trade waste outlet is no reason why the Sanitary District should use the taxpayers' money to pay thirteen percent or sixty percent or any other part of the cost of treatment.

For nineteen years since the Sanitary canal was opened, to say nothing of the many decades before, the packers have been pouring their filth into the river and the canal, much to the distress of the people of the city. While thus ignoring their duty to avoid making public nuisances of themselves they have been rolling up riches beyond the dreams of avarice. One of these companies in 1916 declared a stock dividend of $80,000,000 out of the accumulated surplus, and in that same year showed a net profit of $20,000,000. If the packers should bear the entire expense of the proposed treatment plant, the share of this company would equal only six percent of the net profits of a single year. Of course, 1917 and 1918 have shown similar profits.

Another company, after paying ample dividends, passed to surplus account more than $51,000,000 in the three years 1916, 1917 and 1918. Less than three percent would pay this company's share!

If the packers, after making such profits, remain unwilling to take care of their trade waste we can only conclude that they lack civic consciences, and, if further effort to induce them to do their duty be unavailing, we have our only remedy in the courts. If this Board should attempt to spend the people's money for the benefit of the packers I am informed that taxpayers will attempt to prevent such action by injunction.

The people are entitled to have such an offense as "Bubbly Creek" abolished, and we should leave no means untried to make the creators of that nuisance stop their offensive practices. Fortunately the same neighborhood affords an opportunity for the Sanitary Trustees to abate another great nuisance. Into the Stockyards slip at Thirty-ninth and Halsted streets empties the sewage from the greater part of the South Side from Thirty-fifth street to Seventy-fifth street, comprising some twenty-two square miles of territory. At this place land is available for a treatment plant. If this plant should be built an opportunty will be given if the laws and government regulations permit, to fill up the Stockyards slip and extend Thirty-ninth street, as has long been desired by residents and business men of that region. Certainly the closing of this slip will materially reduce the offensive odors, and the treatment of the sewage will provide an effluent which will greatly improve the water in the canal.

Another crying need is the improvement of conditions in the North Branch of the Chicago river. In the neighborhood of Lawrence avenue the people have held indignation meetings protesting against the filthiness of the water in the river, and throughout the length of the North Branch south of Lawrence avenue, the condition is even more disgraceful. One or more treatment plants are needed here without further delay.

I have less hesitancy in advocating the building of sewage treatment plants at Thirty-ninth street and the North Branch for the reason that in 1916, less than two weeks before I was inaugurated into office, the Sanitary Board formerly adopted the policy of sewage treatment and ordered the engineer to prepare plans for works at these and other places.

Not only are these plants needed to abate appalling nuisances in our city, which will not wait further delay, but the building of them will afford labor for returning soldiers and other men out of work.

Therefore I return without my approval these three appropriations for

$950,000, and urge the Board not to spend the taxpayers' money on work which should be done by the packers themselves, but to make appropriations for treatment plants at Thirty-ninth street and on the North Branch to relieve foul conditions in those regions and to reduce the impurity of the water flowing down the canal to the Desplaines and Illinois rivers.

CHARLES H. SERGEL,
President the Sanitary District of Chicago.

Mr. Lawley moved that the vote by which items "65M2059, Stockyards Intercepting Sewer, $250,000.00," "65J162, Stockyards Activated Sludge Plant, $300,000.00" and "76, Stockyards Activated Sludge Plant Site, $400,000.00," (the same being the only subjects referred to in veto message), were passed in the annual appropriation ordinance for the year 1919, be reconsidered.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley moved that items "65M2059, Stockyards Intercepting Sewer, $250,000.00," "65J162, Stockyards Activated Sludge Plant, $300,000.00" and "76, Stockyards Activated Sludge Plant Site, $400,000.00," in the annual appropriation ordinance for the year 1919, be passed, the veto of the President to the contrary notwithstanding.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Sergel—One.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the question of supplying the 39th Street and Lawrence Avenue pumping stations with coal for a period of ninety days from April 1, 1919.

Your Committee further reports, that owing to the conditions placed by the Fuel Administration of the State of Illinois and the Government on the purchase and delivery of coal, the Sanitary District, on December 13, 1917 (page 1564 of the Proceedings), accepted a proposal of the Edwards & Bradford Lumber Company to furnish two carloads of coal screenings per day until March 31, 1919, for the 39th Street pumping station at the current existent mine mouth maximum price in effect at the time of shipments, plus 15 cents per ton as a commission, the Sanitary District to pay all freight charges. All coal furnished the Lawrence Avenue pumping station has been purchased in the open market under authority of the Board, passed May 31, 1917 (page 771 of the proceedings).

Your committee is of the opinion that it is now advisable that the Chief Engineer prepare specifications for the purchase on the British Thermal Unit basis of coal to supply said pumping stations for the period stated so that only the actual value of heat units may be paid for.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to prepare specifications for the purchase of coal to supply the 39th street and Lawrence avenue pumping stations for ninety days, from April 1, 1919, on the British Thermal Unit basis, and that the Clerk advertise for bids in accordance

with the specifications so prepared by the Chief Engineer; and it is further

Ordered, That the authority of the Board passed May 31, 1917 (page 771 of the Proceedings), to purchase coal in the open market for the 39th Street and Lawrence Avenue pumping stations be, and the same is hereby repealed.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board grant of easement whereby Paul B. Harris and Lena Harris, his wife, for the nominal consideration of $1.00, grant to the Sanitary District of Chicago a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer, with appurtenances thereto, in the Desplaines River District, in, under and through certain real estate owned by said parties. Said grant of easement permits the Sanitary District to transport material, equipment, excavated soil and debris over and across said property. The Sanitary District agrees to provide one twelve inch connection in said sewer for drainage purposes, which may be approved by the Chief Engineer, otherwise the grant of easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement, which has been approved by the Chief Engineer and Attorney, and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District of Chicago, and the Clerk, be, and they are hereby authorized and directed to execute in duplicate said form of easement which is hereto attached, same having been duly executed by said grantors.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE.
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 13, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of February payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for First Half of February.

John McGillen, Clerk (general payroll)		$ 27,525.43

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 146.18	
John McGillen, Clerk (expenses of employes)	104.20	
James O. Heyworth (labor and material, construction of timber dam, 48th ave. bridge, Calumet-Sag Channel)	3,434.92	
A. Guthrie & Co. (labor)	68.18	
A. Guthrie & Co. (labor)	7.79	
A. Guthrie & Co. (labor and material)	3.29	
Nagle Bros. (coal)	24.10	
Kirby Motor Trucking Company (cartage charges)	18.00	
Public Service Company of Northern Illinois (lighting expenses)	.50	
Wisconsin Lime & Cement Company (anthracite coal)	16.68	
Nagle Bros. (coal)	9.85	
Kueffel & Esser Company (1 protractor)	.40	
		3,754.83

Maintenance and Operation Account.

John McGillen, Clerk (special roll, 39th street pumping station)	$ 240.00	
John McGillen, Clerk (special roll, 39th street pumping station)	126.50	
John McGillen, Clerk (freight charges paid I. C. R. R. for hauling fuel to 39th street pumping station)	166.24	
John McGillen, Clerk (freight charges paid C. B. & Q. R. R. for hauling fuel to 39th street pumping station)	78.89	
John McGillen, Clerk (freight charges paid N. Y. C. R. R. for hauling fuel to Lawrence avenue pumping station)	76.05	
John McGillen, Clerk (freight charges paid C. & E. I. R. R. for hauling fuel to Lawrence avenue pumping station)	74.41	
John McGillen, Clerk (freight charges paid C. & A. R. R. for hauling fuel to Lawrence avenue pumping station)	63.92	
John McGillen, Clerk (freight charges paid I. C. R. R. for hauling fuel to Lawrence avenue pumping station)	59.80	
John McGillen, Clerk (freight charges paid P. C. C. & St. L. R. R. for hauling fuel to Lawrence avenue pumping station)	7.93	
Bickett Coal Company (coal)	215.97	
S. M. Junge (postage stamps)	200.00	
Richards, Evans & Co. (coal)	188.30	
Green Engineering Company (repair parts)	117.22	
Green Engineering Company (labor)	25.80	
Green Engineering Company (clips and arch tile)	143.25	
Rosengrant Coal Company (coal)	145.58	
The Chicago & Northwestern Railway Company (1 carload of coal delivered in error, accepted and used)	116.33	
Cosgrove & Co. (coal)	113.26	
J. L. Oxley (boat services)	99.50	
Chicago Fire Brick Company (Crown brick and tile)	92.00	
The S. & S. Fuel Company (coal)	89.11	
Sterling Midland Coal Company (freight charges for coal for operating Lawrence avenue pumping station)	70.13	
Standard Sanitary Mfg. Company (pipe fittings)	57.99	
Willard Storage Battery Company (1 battery)	43.20	
The Hill Pump Valve Company (repair parts)	32.96	
The Lunkenheimer Company (12 valves)	29.21	
The Fred J. Ringley Company (300 voucher forms)	28.75	
American Engineering Company (repair parts)	28.00	
Amounts carried forward	$ 2,730.30	$ 31,280.26

Amounts brought forward	$ 2,730.30	$ 31,280.26
Peerless Express (cartage charges)	23.00	
New York Belting & Packing Company (belt and bristol lace)	21.60	
Conroy Boiler & Tank Works (welding iron arm)	19.00	
Wilbur J. Connell (washers and bolts)	17.90	
Trumbell Waste Mfg. Company (white waste)	17.98	
Burr-Vack Company (Standard diaries)	15.00	
Nesser & Co. (leather carrying case)	15.00	
Stebbins Hardware Company (scoops)	12.50	
H. M. Hooker Glass & Paint Company (lard oil)	10.35	
Peoples Gas Light & Coke Company (gas service)	8.14	
The Hoppes Mfg. Company (repair parts)	4.25	
L. Gould & Co. (toilet paper)	4.25	
The Bristol Company (charts)	4.12	
Herring-Hall-Marvin Safe Company (fitting door)	4.00	
Miller Hardware Company (supplies)	3.85	
Scully Steel & Iron Company (1 channel)	2.20	
Geo. L. Hammons Company, Inc. (twist drills)	2.10	
Burr-Vack Company (buff guides punched)	2.05	
Weil Bros. (floor flanges)	1.51	
Public Service Company of Northern Illinois (electric power)	1.50	
		2,920.60
Clerical Department.		
Burr-Vack Company (invoice books, etc.)	$ 59.55	
The Fred J. Ringley Company (journal)	20.00	
Jas. D. Ahern Company (lettering windows)	8.00	
L. Gould & Co. (drinking cups)	3.75	
		91.30
General Account.		
Burr-Vack Company (waste baskets, etc.)		16.15
Law Department.		
John McGillen, Clerk (court fees, Kimball E. Valentine vs. Robert M. Sweitzer, Sanitary District, et al)	$ 3.00	
John McGillen, Clerk (expenses of employe)	20.00	
Walter E. Beebe (traveling expenses, Illinois Valley cases)	19.92	
R. W. Hosmer & Co. (public official bond, chief attorney)	50.00	
Burr-Vack Company (Perfection calendar pads)	10.18	
Underwood Typewriter Company (adjusting machines)	3.15	
		106.25
Police Department.		
John McGillen, Clerk (expenses of employes)		34.24
Electrical Department.		
John McGillen, Clerk (weekly payroll ending February 7)	$ 617.40	
John McGillen, Clerk (weekly payroll)	339.30	
John McGillen, Clerk (postage stamps)	125.18	
John McGillen, Clerk (expenses of employes)	12.82	
John McGillen, Clerk (expenses of employe)	9.50	
John McGillen, Clerk (water taxes)	3.75	
John McGillen, Clerk (water taxes)	3.75	
Wm. Heggie (boring turning shaft, etc.)	420.52	
Standard Underground Cable Company (cable)	360.00	
Humphrey & Sons Company (cast steel turnbuckles, etc.)	264.00	
K. P. Pipe & Tube Company (supplies)	241.51	
G. & W. Electric Specialty Company, Inc. (metals, tubes, etc.)	232.50	
Amounts carried forward	$ 2,531.23	$ 34,448.80

Amounts brought forward	$ 2,531.23	$ 34,448.80
Joseph Curtin (reimbursement for salary deducted as per order of Employment Committee)	220.16	
John Naghten & Co. (insurance charges)	210.00	
The Texas Company (oil)	201.19	
John McGillen, Clerk (freight charges on Faultless anchors)	2.18	
Commonwealth Edison Company (Minerallac)	150.00	
Commonwealth Edison Company (fuse boxes and plugs)	120.05	
Commonwealth Edison Company (carbon lamps, etc.)	75.90	
Commonwealth Edison Company (pothead bases, etc.)	31.08	
American Supply Company (white waste)	108.73	
Wm. Heggie (second-hand vertical boiler)	100.00	
Inter-State Brass Company (copper tubing, etc.)	80.42	
Sinclair Refining Company (gasoline)	59.80	
Monarch Electric & Wire Company (friction tape, etc.)	53.16	
The Wilson Rubber Company (rubber gloves)	46.20	
H. M. Hooker Glass & Paint Company (paint, etc.)	40.22	
Nic Kerwer & Co. (equipping Ford with glass side enclosure and change top leather)	34.00	
Patrick Brennan (personal injuries)	30.00	
Overland Motor Company (supplies)	28.36	
Garret J. Cushing (personal injuries)	26.00	
The Lombard Governor Company (valve piston rings)	24.19	
L. L. Fleig & Co. (oiled paper, etc.)	22.05	
Lynch-Clarisey Company (lubricating oil)	20.00	
Central Furniture Repair Company (swivel chairs, etc.)	17.25	
Joliet Forge Company (forging)	13.28	
A. C. Miller (gasoline)	12.65	
Windle Garage (storage charges)	12.00	
General Electric Company (cable, etc.)	11.39	
S. & L. Motor Company (repairing windshield, etc.)	10.88	
The Western Union Telegraph Company (clock service)	6.75	
Wilmington Fibre Specialty Company (black fibre)	6.43	
Schweitzer & Conrad, Inc. (fuse clips)	3.76	
Joliet Welding & Repair Shop (cylinder head)	3.00	
Henry Stuckart (flat corner irons, etc.)	2.53	
The Linde Air Products Company (oxygen)	2.20	
Public Service Garage (charges for towing car)	1.00	
Westinghouse Electric & Mfg. Company (cartage charges)	.55	
		4,417.59

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 30.45		
Maintenance and Operation Account	40.43		
		$ 70.88	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 50.14		
Maintenance and Operation Account	3.10		
		53.24	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 34.55		
Maintenance and Operation Account	15.69		
		50.24	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 37.39		
Maintenance and Operation Account	3.56		
		40.95	
John McGillen, Clerk (payroll for Stockyards Testing Station, week ending February 1)—			
Amounts carried forward		$ 215.31	$ 38,866.39

Amounts brought forward		$ 215.31	$ 38,866.39
Construction Account	$ 110.80		
Maintenance and Operation Account	43.20		
		154.00	
Burr-Vack Company (diary and pens)—			
Construction Account	$ 1.65		
Maintenance and Operation Account	3.84		
		5.49	
			374.80
Grand Total			$ 39,241.19

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Engineering.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on October 24, 1918 (pages 1211-1212 of the Proceedings), the Board passed an ordinance for laying out and establishing a right of way for providing for the building therein of an intercepting sewer, drain and outlet, with appurtenances thereto, as an adjunct to the Calumet-Sag Channel of the Sanitary District. This intercepting sewer was to be constructed for the purpose of taking care of the domestic sewage arising in the territory lying between 95th street and 114th street on the east side of the Calumet river.

Your Committee further reports that the right of way of said intercepting sewer has been materially changed by the Engineering Department, and it is necessary that said ordinance be repealed and a new ordinance for said improvement passed.

Your Committee herewith transmits to the Board an ordinance repealing the ordinance above referred to, and recommends the passage of said repealing ordinance.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.
PATRICK J. CARR,
JAS. H. LAWLEY,
MATT. A. MUELLER,
Committee on Engineering.

The following is the ordinance:

AN ORDINANCE

Repealing an Ordinance, Entitled, "An Ordinance for Laying out and Establishing a Right of Way for and Providing for the Building of an Intercepting Sewer, Drain and Outlet, the Same to be an Adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago."

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That the ordinance entitled "An Ordinance for Laying Out

and Establishing a Right of Way for and Providing for the Building of an Intercepting Sewer, Drain and Outlet, the Same to be an Adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago," passed by the Board of Trustees of The Sanitary District of Chicago at its regular meeting held October 24, 1918, and appearing on pages 1211 and 1212 of the Proceedings of the Board for the year 1918, be, and the same is hereby, repealed.

SECTION 2. This ordinance shall be in force and effect from and after its passage.

Mr. Littler moved that the report be adopted and that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering herewith transmits to the Board three ordinances for laying out and establishing rights of way for and providing for the building therein of intercepting sewers, drains and outlets with appurtenances thereto, as adjuncts of the Calumet-Sag Channel of the Sanitary District.

The intercepting sewers are briefly described as follows:

(A)—This intercepting sewer is to be built for the purpose of taking care of the domestic sewage arising in the territory lying between Ninety-fifth street and 114th street on the east side of the Calumet river.

(B)—This intercepting sewer is to be built for the purpose of caring for the sewage arising in certain territory lying northeasterly of Harbor avenue and extending from the east line of The Strand to the north line of East Ninety-fifth street and an overflow sewage extending from the east line of Ninety-fifth street to the Calumet river.

(C)—This intercepting sewer is to be built in Edbrooke avenue and Edbrooke avenue produced from the Calumet sewage pumping station to the center thread of the Calumet river and is desiged as an outlet for the excess water coming into said pumping station in times of flood.

Your Committee further reports that it has examined said ordinances and approved the same and therefore recommends the passage of said ordinances.

Respectfully submitted,

H. E. LITTLER,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

The following ordinance was transmitted with said report:

AN ORDINANCE

An Ordinance for Laying out and Establishing a Right of Way For and Providing for the Building of an Intercepting Sewer, Drain and Outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago.

Be it ordained by the Board of Trustees of The Sanitary District of Chicago.

SECTION 1. That there be and is hereby laid out, located and established a right of way for an intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, together with all necessary appurtenances thereto, upon, under and through the following described real estate situated in the City of Chicago, County of Cook and State of Illinois, to-wit:

That part of East 97th street lying west of the west line of Avenue N and east of the Calumet river; also a strip of land sixty (60) feet in width extending from a line one hundred twenty-four (124) feet west of the west line of said Avenue N to the south line of East 96th street, the center line of said strip being described as follows:

Beginning at a point in the center line of East 97th street one hundred twenty-four (124) feet west of the west line of Avenue N, thence westerly to a point twenty-five (25) feet southwesterly measured at right angles from the southwesterly boundary of the right of way of the Pittsburgh, Fort Wayne and Chicago Railroad Company and forty (40) feet easterly measured at right angles from the easterly channel line of the Calumet river as established by the United States Government; thence westerly approximately three hundred twenty (320) feet along a line at right angles to said easterly channel line to a point in a line thirty (30) feet northeasterly of and parallel to the southwesterly line of Block 113, in South Chicago Subdivision; thence northwesterly along a line thirty (30) feet northeasterly of and parallel to the southwesterly line of said Block 113 to an intersection with a line four hundred twenty-five (425) feet east of and parallel to the east line of Baltimore avenue; thence north along a line four hundred twenty-five (425) feet east of and parallel to the east line of Baltimore avenue to the south line of east 96th street; also that part of East 96th street lying between the east line of Baltimore avenue and a line four hundred fifty-five (455) feet east of and parallel to said east line of Baltimore avenue; also that part of Baltimore avenue lying between the south line of East 96th street and the north line of east 95th street, all of said right of way being situated in Sections five (5) and six (6), Township thirty-seven (37) North, Range fifteen (15) East of the Third Principal Meridian in the City of Chicago, County of Cook and State of Illinois.

SECTION 2. Attached hereto, and made a part of this ordinance is a plat or map entitled "Ordinance Map For an Intercepting Sewer, Drain and Outlet, the same to be an Adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago" dated February 13, 1919, on which said plat or map the boundary lines of said right of way are indicated in red.

SECTION 3. That the making of the improvement above described is hereby provided for, and there shall be constructed, maintained and operated within the lines of said right of way a covered sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of the Sanitary District of Chicago, together with all appurtenances thereto, to be built either of brick, concrete or reinforced concrete.

SECTION 4. The City of Chicago shall have the right to connect, in a manner to be approved by the Chief Engineer of The Sanitary District of Chicago, any new sewer (not including, however, house drains) or system of sewers hereafter installed by the City of Chicago, with the intercepting sewer, drain and outlet to be constructed hereunder by The Sanitary District of Chicago.

SECTION 5. The Committee on Finance of the Board of Trustees of The

Sanitary District of Chicago is hereby authorized and directed to acquire for and on behalf of The Sanitary District of Chicago, upon such terms as said Committee on Finance may deem just and reasonable, the perpetual and temporary easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate the said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, upon, under and through the pieces or parcels of land described in Section 1 of this ordinance; and in the event that said Committee on Finance is unable to agree with any owners or parties in interest for or in respect to the compensation to be paid by any such owners or parties in interest for said easements, privileges, right and authority as above set forth, then the Attorney of The Sanitary District of Chicago shall institute proceedings in such court as he may deem proper and acquire said easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate the said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, upon, under and through the pieces or parcels of land described in Section 1 of this ordinance by virtue of the Eminent Domain Law of the State of Illinois.

SECTION 6. This ordinance shall be in force and effect from and after its passage.

Mr. Littler moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

The following ordinance was transmitted with said report:

AN ORDINANCE

For Laying out and Establishing a Right of Way for and Providing for the Building of an Intercepting Sewer, Drain and Outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago.

SECTION 1. That there be and is hereby laid out, located and established a right of way for an intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, together with all necessary appurtenances thereto, upon, under and through the following described real estate situated in the City of Chicago, County of Cook and State of Illinois, to-wit:

That part of East Ninety-Fifth street lying between the west line of Baltimore avenue produced and the Calumet river, also a strip of land sixty (60) feet in width lying northwesterly of and adjacent to the Indian boundary line and extending from the north line of east Ninety-fifth street to the southwesterly line of South Chicago avenue; also that part of Harbor avenue, extending from the southwesterly line of South Chicago avenue to the east line of The Strand including all street and alley intersections between said limits.

SECTION 2. Attached hereto and made a part of this ordinance is a plat or map entitled "Ordinance Map For an Intercepting Sewer, Drain and Outlet, the same to be an Adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago" dated February 13, 1919, on which said plat or map the boundary lines of said right of way are indicated in red.

SECTION 3. That the making of the improvement above described is hereby provided for and there shall be constructed, maintained and operated within the lines of said right of way a covered sewer, drain and outlet, the same to be

an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, together with all appurtenances thereto, to be built either of brick, concrete or reinforced concrete.

SECTION 4. The City of Chicago shall have the right to connect, in a manner to be approved by the Chief Engineer of The Sanitary District of Chicago, any new sewer (not including, however, house drains) or system of sewers hereinafter installed by the City of Chicago, with the intercepting sewer, drain and outlet to be constructed hereunder by The Sanitary District of Chicago.

SECTION 5. The Committee on Finance of the Board of Trustees of The Sanitary District of Chicago is hereby authorized and directed to acquire for and on behalf of The Sanitary District of Chicago upon such terms as said Committee on Finance may deem just and reasonable, the perpetual and temporary easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, upon, under and through the pieces or parcels of land described in section 1 of this ordinance; and in the event that said Committee on Finance is unable to agree with any owners or parties in interest for or in respect to the compensation to be paid to such owners or parties in interest for such easements, privileges, right and authority as above set forth, then the Attorney of The Sanitary District of Chicago shall institute proceedings in such court as he may deem proper and acquire said easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate the said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago upon, under and through the pieces or parcels of land described in section 1 of this ordinance by virtue of the Eminent Domain law of the State of Illinois.

SECTION 6. This ordinance shall be in force and effect from and after its passage.

Mr. Littler moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

The following ordinance was transmitted with said report:

AN ORDINANCE

An Ordinance for Laying out and Establishing a Right of Way For and Providing for the Building of an Intercepting Sewer, Drain and Outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago.

Be it ordained by the Board of Trustees of The Sanitary District of Chicago.

SECTION 1. That, there be and is hereby laid out, located and established a right of way for an intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, together with all necessary appurtenances thereto, upon, under and through the following described real estate situated in the City of Chicago, County of Cook and State of Illinois, to-wit:

A strip of land sixty-six (66) feet in width across lot three (3) in Warren's Addition to Wildwood, the center line of said strip of land being the center line of Edbrooke avenue produced northward; also Edbrooke avenue from the south line of said lot three (3) to the south line of 127th street including all street and alley intersections; also a strip of land sixty-six (66) feet in width extending from said south line of 127th street to the center line of the Little Calumet river, the center line of said strip

of land being a line extending from the intersection of the center line of Edbrooke avenue with the south line of 127th street southwesterly parallel with the westerly line of Indiana avenue; all of said land being located in Section twenty-eight (28), township thirty-seven (37) north, range fourteen (14) east of the third principal meridian south of the Indian Boundary line, in the City of Chicago, County of Cook, State of Illinois.

SECTION 2. Attached hereto, and made a part of this ordinance is a plat or map entitled, "Ordinance Map for an Intercepting Sewer, Drain and Outlet, the same to be an Adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago" dated February 13, 1919, on which said plat or map the boundary lines of said right of way are indicated in red.

SECTION 3. That the making of the improvement above described is hereby provided for, and there shall be constructed, maintained and operated within the lines of said right of way a covered sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, together with all appurtenances thereto to be built either of brick, concrete or reinforced concrete.

SECTION 4. The Committee on Finance of the Board of Trustees of The Sanitary District of Chicago is hereby authorized and directed to acquire for and on behalf of The Sanitary District of Chicago, upon such terms as said Committee on Finance may deem just and reasonable, the perpetual and temporary easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate the said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago, upon, under and through the pieces or parcels of land described in Section 1 of this ordinance; and in the event that said Committee on Finance is unable to agree with any owners or parties in interest for or in respect to the compensation to be paid to any such owners or parties in interest for the said easements, privileges, right and authority as above set forth, then the Attorney of The Sanitary District of Chicago shall institute proceedings in such court as he may deem proper and acquire said easements, privileges, right and authority to construct, reconstruct, repair, maintain and operate the said intercepting sewer, drain and outlet, the same to be an adjunct of the Calumet-Sag Channel of The Sanitary District of Chicago upon, under and through the pieces or parcels of land described in Section 1 of this ordinance, by virtue of the Eminent Domain Law of the State of Illinois.

SECTION 6. This ordinance shall be in force and effect from and after its passage.

Mr. Littler moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, February 13, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Electrical Development herewith presents contracts for renewal with the Triner Scale & Mfg. Co., a corporation, 2714 West Twenty-first street, and with P. J. King, 1740 North Crawford avenue, wherein said parties agree to take and the Sanitary District agrees to furnish electrical energy for the

periods of time and upon the terms and conditions therein set forth, and said contracts have been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate the attached contracts which have heretofore been executed by said parties.

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT A. MUELLER,
WM. J. HEALEY,

Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawler, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, February 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

REINSTATEMENTS

Due to honorable discharge from the United States Army or Navy service

Engineering Deparment—

O. L. Eltinge, Assistant Engineer, $225.00 per mo.

Electrical Department—

Henry Lawson, Operator $145.00 per month.

George E. Long, Operator, $125.00 per month.

Edw. J. Schneider, Assistant Repairman, $130.00 per month.

INCREASES

Omitted from report of February 6.

Electrical Department—

R. Hardell, Engineer and Repairman, from $140.00 to $155.00 per mo.

Albert Stange, Operator, from $110.00 to $125.00 per mo.

Wm. D. Cotter, Operator, from $110.00 to $125.00 per mo.

J. McConkey, Lineman, from $150.00 to $165.00 per mo.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman,

JAS. H. LAWLEY,
H. E. LITTLER,
MATT A. MUELLER,

Committee on Employment.

Mr. Paullin moved that the report be approved, published and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Mr. George D. Webb in regard to dispute over lake levels as affected by the Sanitary Canal and to road construction and public work.

Referred to the Committee on Engineering.

Payroll of The Sanitary District of Chicago for the Month of October, 1918.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakenwald Ave., President of Board	$	625.00
Fred D. Breit, 5700 Washington Blvd., Trustee		416.67
James M. Dailey, 549 W. 31st St., Trustee		416.67
Charles E. Reading, 11520 S. Michigan Ave., Trustee		416.67
Wallace G. Clark, 30 N. Michigan Ave., Trustee		416.67
George W. Paullin, 30 N. Michigan Ave., Trustee		416.67
Patrick J. Carr, 3508 S. Western Ave., Trustee		416.67
James H. Lawley, 1925 W. Chicago Ave., Trustee		416.67
Matthias A. Mueller, 5017 S. Wood St., Trustee		416.67
Wm. B. Foley, 819 Independence Blvd., Secretary to President		250.00
Total	$	4,208.36

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division.

John McGillen, 2136 Cleveland Ave., Clerk of Board	$	566.67
Thomas J. Whalen, 7950 Harvard Ave., Committee Clerk		200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary		150.00
Bryan Hartnett, 3518 So. Washtenaw Ave., Stenographer		150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster		200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk		110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk		120.06
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk		100.00
Felix Quigley, 2250 Larrabee St., Clerk		95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator		100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant		300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk		130.00

Accounting and Record Division.

George J. Miller, 3000 S. Wells St., General Accountant		350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk		200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk		160.00
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Record Clerk		160.00
G. A. Kelly, 436 Homan Ave., Budget Bookkeeper		150.00
Jewel L. Walsh, 542 W. 65th St., Stenographer		125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk		125.00
Jas. T. Graham, 3115 S. Union Ave., Budget Clerk		125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator		85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk		175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper		135.00
John A. Parker, 3333 Emerald Ave., Clerk		125.00
Louise L. Levy, 4817 Prairie Ave., Stenographer		100.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier		125.00
Total	$	4,361.67

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$	208.33

DEPARTMENT OF REAL ESTATE.

Edward Keeley, 2816 N. Francisco Ave., Manager	$	300.00
Frances Rodney, 537 E. 34th St., Secretary		135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator		125.00
Total	$	560.00

DEPARTMENT OF LAW.

Edmund D. Adcock, 4800 Dorchester Ave., Attorney	$ 916.66
Ross C. Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	441.67
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst. Attorney	500.00
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
George F. Mulligan, 228 S. Mayfield Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	225.00
George H. Hough, 500 Diversey Parkway, Asst. Attorney	250.00
Matilda M. Lynn, 5343 Kenmore Ave., Voucher Clerk and Bookkeeper	125.00
John J. Gaynor, 5215 Washington Blvd., Investigator	175.00
James A. Kearns, 21 W. Garfield Blvd., Law Clerk	200.00
Patrick J. Sheehan, 818 N. Clark St., Investigator	125.00
Irene Mueller, 5017 S. Wood St., Stenographer	110.00
Miriam Ehrlich, 3129 S. Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	175.00
Total	$ 7,161.65

DEPARTMENT OF POLICE.

John F. O'Neill, 7927 S. Morgan St., Marshal	$ 250.00
Joseph Kennefick, 3907 Emerald Ave., Sergeant	125.00
James Haggerty, 3201 Princeton Ave., Sergeant	125.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	125.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	115.00
Daniel D. Curtin, 3313 W. Madison St., Patrolman	115.00
Sylvester O'Brien, 7318 Langley Ave., Patrolman	115.00
Michael Plunkett, 100 S. Sangamon St., Patrolman	115.00
Joseph F. Ring, 1210 N. Halsted St., Patrolman	115.00
James B. Walsh, 65 E. 42nd St., Patrolman	115.00
Emil Klank, 3616 S. Western Ave., Patrolman	115.00
Matthew Tychsen, 812 Massasoit Ave., Patrolman	115.00
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	115.00
Edward Morrissey, 157 N. Sheldon St., Patrolman	115.00
Tony Alessi, 2547 Wallace St., Patrolman	115.00
Anton J. Stasch, 2938 N. Springfield Ave., Patrolman	115.00
Frank Uczciwek, 1226 Cleaver St., Patrolman	115.00
Anthony Intrieri, 914 W. Polk St., Patrolman	115.00
Wm. Moran, 6229 S. Lincoln St., Patrolman	115.00
John J. Burke, 1252 S. Keeler Ave., Patrolman	115.00
John Conlon, 360 Wendel St., Patrolman	115.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	115.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	115.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	115.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	115.00
R. J. Dooley, 2146 W. 21st Pl., Patrolman	115.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	115.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	115.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	115.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	115.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	115.00
John E. Pierce, 4080 S. Wells St., Patrolman	115.00
Frank Timoney, 732 N. Leavitt St., Patrolman	115.00
James Mooney, 3450 Walnut St., Patrolman	115.00

Herman Tabbert, 1723 Hastings St., Patrolman	115.00
Henry D. Lynch, 5635 S. Wood St., Patrolman	100.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	115.00
Charles A. Ison, 5926 S. Wood St., Patrolman	115.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	115.00
Denis McCaffrey, 3919 Jackson Blvd., Patrolman	115.00
Patrick H. Leahy, 2744 Wentworth Ave., Patrolman	115.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	100.00
Frank Kouba, 656 W. 18th St., Patrolman	100.00

Temporary Employes.

John J. Gleason, 3026 Emerald Ave., Patrolman	115.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	115.00
A. J. McVady, 6432 Drexel Ave., Patrolman	115.00
George Kirwan, 324 N. Michigan Ave., Patrolman	107.50
Peter J. Trenz, 1931 Cuyler Ave., Patrolman	115.00
Geo. E. Paul, 4309 N. Ridgeway Ave., Patrolman	115.00
Louis Lorentzen, 3637 N. Sawyer Ave., Patrolman	100.00
George A. Keller, 2820 Warren Ave., Patrolman	100.00
J. T. Johnson, Lemont, Ill., Patrolman	100.00
Barney Klecka, 1853 S. Western Ave., Ptarolman	100.00
Chas. R. Fross, 801 E. 41st St., Patrolman	100.00
Michael Conway, 1944 N. Lincoln St., Patrolman	100.00
Thomas Tyrell, 4107 S. Ashland Ave., 23 days	75.81
G. Havill, 5634½ Maryland Ave., 18 days	58.06
Total	$ 6,711.37

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 500.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	250.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	175.00
O. W. Boers, Chillicothe, Ill., Draftsman	175.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	145.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	120.00
L. H. Welcome, 553 W. 35th St., Computor	115.00
Joseph McAvoy, 3802 Union Ave., Rodman	100.00
John Markham, 1243 Foster Ave., Chicago, Ill., Rodman	100.00
Total	$ 1,680.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 6.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	5.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	6.00
Joseph Limacher, Minooka, Ill., Gauge Reader	5.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
William Camegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
Sam G. Belt, 106 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	10.00
John Brookman, Seneca, Ill., Gauge Reader	5.00
George A. Campbell, Marseilles, Ill., Gauge Reader	5.00
Noah Morial, Marseilles, Ill., Gauge Reader	5.00
James McGrogan, Dayton, Ill., Gauge Reader	6.00
J. E. Barnard, C. B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	10.00
George Keeley, Wilmington, Ill., Gauge Reader	5.00
John F. Alt ,County Asylum, Ottawa, Ill., Gauge Reader	5.00

Bernard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	6.00
Peter DeGroot, Peru, Ill., Water Sampler and Gauge Reader	10.00
Henry Harbeck, Utica, Ill., Gauge Reader	5.00
David Gleason, DePue, Ill., Gauge Reader	5.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	5.00
Philip Riley, Lacon, Ill., Gauge Reader	5.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	5.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	5.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	5.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	5.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	5.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	5.00
William LeTissier, Bath, Ill., Gauge Reader	5.00
W. L. Waters, Browning, Ill., Gauge Reader	5.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	5.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	5.00
Total	$ 169.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	375.00
Philip Harrington, 117 N. Kildare Ave., Division Engineer	375.00
E. L. Cooley, 2136 Indiana Ave., Asst. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Junior Engineer	175.00
J. T. Soderstam, 1211 Newport Ave., Draftsman	175.00
Fred W. Kirk, 68 E. 56th St., Draftsman	160.00
M. P. Williams, 2749 Washington Blvd., Draftsman	160.00
R. G. Galke, 1834 Eddy St., Draftsman	160.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
L. W. A. Bunge, 418 N. Taylor Ave., Oak Park, Asst. Mech. Eng	150.00
Rudolph Christoph, 2139 Melrose St., Superintendent	150.00
Nellie McArdle, 8019 Green St., Stenographer	110.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	125.00
Clarence E. Wilson, 2817 N. Clark St., Rodman	115.00
Edwin C. Crowe, 2318 N. Kenneth Ave., Tracer	85.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	275.00
Ingolf Erdal, 1504 S. 4th Ave., Maywood, Bridge Computer	200.00
Edwin A. Howes, 5340 Windsor Ave., Bridge Computer	200.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Computer	200.00
Richard DeYoung, 10226 State St., Bridge Draftsman	190.00
E. F. Doud, 418 E. 64th St., Instrument Man	150.00
Stanley A. Jankowski, 3222 Wall St., Sub Instrument Man	130.00
F. E. Helmick, 6030 Union Ave., Sub Instrument Man	130.00

Record Division.

Theodore Buskirk, 3903 Ellis St., Resident Engineer	175.00
W. T. Lynch, 5643 Wayne Ave., Record Clerk	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	160.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Computer	130.00
Otto Gnewuch, 2303 S. Dearborn St., Computer	120.00
Fred H. Busse, 5818 N. Talman Ave., Computer	120.00
E. Edinger, 3259 Indiana Ave., Clerk	115.00
Edna Burke, 11349 Indiana Ave., Stenographer	110.00

John F. Harper, 311 E. 45th St., Stenographer	110.00
Geo. Neupert, 75 W. Jackson Blvd., Inspector	120.00
Hydraulic Measurements Division.	
John D. O'Donnell, 1048 W. 15th St., Rodman	115.00
Total	$ 8,396.66
Channel Maintenance Division.	
Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
John A. Kozinski, 8636 Exchange Ave., Instrument Man	150.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Wm. J. Jaeger, 3028 Emerald Ave., Sub Instrument Man	130.00
Joseph J. Kelly, 3155 Union Ave., Rodman	115.00
Wm. C. Snyder, 2245 N. Keeler Ave., Inspector	115.00
Frank Palermo, 7037 S. Hermitage Ave., Launch Engineer	115.00
Total	$ 1,238.33
Sanitary Division.	
Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 500.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer	225.00
L. C. Whittemore, 1216 East 54th St., Asst. Sanitary Engingeer	250.00
John R. Palmer, 724 Custer Ave., Evanston, Asst. Chemist, 15 days	57.50
Herbert Swanson, 903 N. Central Ave., Asst. Chemist	115.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Junior Engineer	175.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
Walter M. DeBerard, 1418 Howard Ave., Junior Engineer	175.00
G. A. Ripley, 6328 S. Ashland Ave., Head Filter Attendant	110.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	125.00
Edward Posthuma, 10440 Wentworth Ave., Sub Instrument Man	115.00
John H. Burke, 1206 Webster Ave., Filter Atendant	110.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Asst	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A.	100.00
Mechanical Division.	
Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	250.00
Arthur A. Bleau, 3141 Princeton Ave., Draftsman	125.00
Total	$ 2,982.50
Sewer Construction Division.	
R. H. Burke, 11240 S. Irving St., Division Engineer	$ 375.00
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. L. Barker, 550 E. 50th Pl., Resident Engineer	200.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Junior Engineer	200.00
Robert E. Harmon, 4321 N. Lowell Ave., Junior Engineer	175.00
Norman Newlands, 4902 N. Albany Ave., Junior Engineer	175.00
N. R. Herlihy, 2743 N. Albany Ave., Instrument Man	150.00
Wm. J. Quinlan, 6350 Winthrop Ave., Instrument Man	150.00
Stanley Wiza, 2639 S. 49th Ave., Rodman	100.00
Chas. McMorrow, 6357 Wabash Ave., Rodman	100.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
John Kolar, 2231 W. 19th St., Computer	120.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Inspector	115.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Inspector	115.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 E. Ohio St., Rodman	115.00
Wm. Kamberg, 5044 Marshfield Ave., Inspector	115.00

Henry Altman, 7000 Lafiin St., Rodman	115.00
Robert Gilmartin, 3302 So. Seeley Ave., Rodman	115.00
James Ryan, 3729 Emerald Ave., Rodman	115.00
John Richards, 2641 Princeton Ave., Rodman	115.00
Thomas Doyle, 3527 Lowe Ave., Rodman	115.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00
A. R. Runston, 11135 Edbrook Ave., Watchman, 18 days	68.63
George T. Giles, 4862 Winthrop Ave., Filter Attendant	115.00
Richard Friend, 1709 Adams St., Rodman, 15 days	57.50
Wm. J. Bonn, 1343 Garfield Blvd., Rodman	130.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Milton J. Kman, 5214 Lowe Ave., Rodman	100.00
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Richard Boegelsack, 10522 Ave. M, Rodman	100.00
John Witt, 2057 21st Pl., Rodman	100.00
Walter Gierszeski, 1409 W. Superior St., Rodman	115.00
J. J. Savage, 407 So. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	100.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	100.00
Total	$ 5,127.13

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Walter H. Faget, 3565 W. Van Buren St., Junior Engineer	175.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Junior Engineer	175.00
Fred W. Bethig, 11736 S. State St., Inspector	125.00
George F. Fitzgerald, 189 Walnut St., Blue Island, Sub Instrumentman	130.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector, 4 days	14.84
Maurice J. Powers, 3621 Union Ave., Rodman, 4 days	14.84
Edward E. Bochmann, 473 York Pl., Blue Island, Rodman	115.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
John Daly, 3632 S. Hamilton Ave., Rodman, 15 days	50.00
Thos. A. Haven, 3408 S. Oakley Ave., Rodman, 14 days	51.93
Total	$ 1,432.61

Sag Channel Construction Division.

John D. Hurley, 7437 W. 62nd Pl., Ass't Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Rodman	130.00
Richard F. Kelly, 3119 W. 42nd Pl., Sub Instrumentman	130.00
Arthur J. Youngberg, 1408 Melrose St., Rodman	115.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Flagman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
J. P. Sullivan, 944 W. 55th St., Rodman	115.00
J. T. Rowe, 4034 Palmer St., Rodman	115.00
Total	$ 1,271.00

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, No. Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer	150.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
John J. Alguire, 3918 Lake Park Ave., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Daniel Gleason, 848 Rush St., Engineer and Machinist	150.00
John McGlynn, 3232 Wallace St., Machinist	150.00
Max Nork, 4428 So. Albany Ave., Machinist	150.00
William Lally, 605 W. 31st St., Craneman	120.00
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Chas. Kevil, 4960 Park Ave., Clerk	125.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
F. A. Wagner, 120 W. 113th Pl., Oiler	110.00
M. F. Walsh, 3116 Union Ave., Oiler	110.00
John P. Doyle, 600 W. 31st St., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
George Carey, 3310 Union Ave., Engineer	150.00
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Alec Johnstone, 416 W. 79th Pl., Fireman	110.00
Michael Cronin, 7727 Blackstone Ave., Fireman	110.00
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank Dushek, 3232 Wallace St., Oiler	110.00
Michael Gleason, 3337 Parnell Ave., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler,	110.00
Samuel Vanderweil, 10934 Michigan Ave., Laborer	96.00
Arthur LaBeau, 4952 Marshfield Ave., Laborer	96.00
Joseph Runella, 455 W. 25th Pl., Laborer	96.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
Patrick Conners, 10603 Lafayette Ave., Laborer, 20½ days	65.03
Frank McGovern, 549 W. 32nd St., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 319 W. 25th Pl., Laborer	96.00
James Melville, 2908 Fifth Ave., Laborer	96.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter Helper	175.50
Patrick Holland, 4156 Wells St., Steam Fitter	175.50
Bruno Salarano, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer	96.00
Jos. Dinovo, 624 W. 25th Pl., Laborer	96.00
Tony Bagnolia, 216 W. 24th Pl., Laborer	96.00
Henry Lyons, 2948 Bonfield St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
J. Lucy, 2808 Emerald Ave., Oiler	110.00
E. Ryan, 2715 Emerald Ave., Oiler	110.00
M. F. Schopf, 508 S. 9th Ave., Maywood, Engineer	150.00
Con Blocker, 10617 La Salle St., Laborer, 24½ days	77.42
Total	$ 5,966.45

LAWRENCE AVENUE PUMPING STATION.

George T. Galavan, 2349 Altgeld St., Engineer in Charge	$ 200.00
Thos. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 2144 Warner Ave., Oiler	110.00
Dan O'Hern, 3603 Lowe Ave., Oiler, 25½ days	92.26
James Cullen, 3535 S. Hamilton Ave., Oiler	110.00
George O'Leary, 5705 Union Ave., Oiler	110.00

Patrick Coyle, 4700 West End Ave., Fireman	110.00
Albert C. Selle, 429 N. Sawyer Ave., Oiler	110.00
James O'Leary, 3449 N. Troy St., Fireman	110.00
Ladislov Sekvenc, 2527 Kedzie Ave., Oiler, 23½ days	85.39
Peter Keniry, 459 W. 38th St., Fireman, 25½ days	92.26
Adam Klein, 2745 Ward St., Fireman	110.00
George Stumpf, 2049 Bingham St., Engineer	150.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave	110.00
T. J. Reaney, 3838 Park Ave., Janitor	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
W. Shillerberg, 743 Weed St., Laborer	96.00
Thos. Brannigan, 732 W. Madison St., Laborer	96.00
John A. Miller, 2543 N. Racine Ave., Engineer	150.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter	175.50
Bronislaw Wosny, 2332 N. Maplewood Ave., Oiler	110.00
Total	$ 2,775.41

LOCK, DAM AND BRIDGE TENDERS.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
Charles J. Case, 3247 W. Division St., Asst. Dam Tender	100.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, 7140 Emerald Ave., Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
Andrew Ryder, Lockport, Ill., Relief Bridge Tender	100.00
Total	$ 1,040.00

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
A. F. Napieralski, 2013 S. Jefferson St., Ledger Clerk	125.00
F. F. Anderson, 3719 W. Ohio St., Ledger Clerk	125.00
James A. Daly, 3633 S. Hamilton Ave., Clerk, 15 days	62.50
George J. O'Connell, 2952 Indiana Ave., Bookkeeper	125.00
Marie Reardon, 7002 Laflin St., Record Clerk	140.00
May Broderick, 4208 Adams St., Stenographer	110.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., Clerk	125.00
Frank A. Stadler, 2906 Lincoln Ave., Clerk	125.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	135.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
John L. Fitzsimons, 5301 Union Ave., Clerk	125.00
Frank F. Hoffman, 2618 Normal Ave., Stenographer	125.00
John T. Howe, 610 W. 37th St., Clerk, 13½ days	62.50
Clarence F. Reich, 2703 N. Ashland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk, delayed time	200.00

Geo. F. Lambin, 3022 Osgood St., Clerk	125.00
R. T. Spoerer, 6141 Morgan St., Clerk	125.00
Frank J. Martin, 1141 N. Lockwood St	125.00
William Phelan, 6141 Morgan St., Clerk, 29 days	71.37
Leo J. Feeney, 8942 S. Laflin St., Office Boy	60.00

Storeroom.

Thos. F. Lamb, 2713 Crowell St., Storekeeper	150.00
Wm. Smith, 528 N. Homan Ave., Asst. Storekeeper	125.00
John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 4502 Emerald Ave., Warehouseman	100.00
Michael Bell, 7929 So. Morgan St., Warehouseman	100.00
Wm. Barrett, 3131 Princeton Ave., Watchman	96.00
John J. Hartnett, 6506 Marshfield Ave., Watchman	96.00
J. P. Lynch, 2842 Emerald Ave., Yard Foreman	155.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
Jas. A. Byrnes, 2137 Warren Ave., Inspector	175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Thomas Kelly, 220 W. 106th Pl., Inspector	175.00
Fred Meyer, 3510 Broadway, Draftsman	150.00
P. J. Burke, 2001 Indiana Ave., Plumber	162.50
B. H. Young, 4209 Indiana Ave., Carpenter	160.00
C. R. Lyons, 3036 Shields Ave., Carpenter	160.00
Patrick Conway, 2912 Bonfield Ave., Laborer	63.00
J. C. Kraiss, 3327 S. Hamilton Ave., Painter	150.00

Engineering Division.

J. F. Maddox, 4442 Magnolia Ave., Draftsman	200.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00

Testing Division.

F. A. DeMuth, 4247 W. 21st St., Testing Engineer	200.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	150.00
R. C. Pedrick, 2418 W. 36th St., Electrician	135.00
C. M. Pressmall, 330 N. Laflin St., Electrician	135.00
H. Hullinger, 1222 W. 31st St., Electrician Helper	110.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	110.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	200.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	150.00
George Enright, 1439 W. Marquette Road, Meter Inspector	125.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	100.00
S. Murphy, 1534 Edgemont Ave., Meter Reader	100.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	125.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	125.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector	100.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	275.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	225.00
Samuel E. Cook, 11321 Forest Ave., Payroll and Record Clerk	125.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanston, Stenographer and Clerk	125.00
Jas. A. Haggerty, 3532 Van Buren St., Draftsman	125.00
Isabel Ward, 6548 Glenwood Ave., Telephone Operator, 16½ days	46.62
Mary Faulkner, 7642 S. Ada St., Temporary Operator, 1 day	2.83

Gertrude Eberhardt, 3604 W. Polk St., Temporary Operator, 3 days	8.22
L. A. Jones, 3538 Vernon Ave., Relief Operator	110.00
J. T. Layton, 6511 S Artesian Ave., Relief Operator	130.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	135.00
Chas. Busch, 56 E. 100th St., Messenger	85.00
M. K. Badke, 2950 Keeley St., Utility Man	100.00
Paul Matt, 2510 Leland Ave., Relief Operator	130.00
Albert Stange, 504 Ferdinand St., Temporary Operator	110.00
Max Ebler, 2226 Wabash Ave., Relief Operator	110.00
Geo. Lutiger, 2322 W. 12th St., Temporary Operator, 9 days	31.92
W. D. Cotter, 6125 Justine St., Temporary Operator	110.00
J. Mildenberg, 3744 N. Spaulding Ave., Relief Operator	110.00

Overhead Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	210.00
J. Sharp, 2324 W. Madison St., Foreman	210.00
A. P. Conlon, 3343 Lowe Ave., Foreman, 16 days	79.84
J. Lamping, 3016 Congress St., Foreman	175.00
C. C. Wilson, 3214 N. Whipple St., Foreman	175.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	175.00
I. L. Damrow, 6417 S. Campbell Ave., Temporary Foreman	150.00
C. O'Leary, 646 W. 47th Pl., Lineman	150.00
Edward Lee, 6343 Carpenter St., Lineman	153.23
W. F. Jones, 3306 Irving Ave., Lineman	150.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	150.00
James Britton, 3039 Pitney Court, Lineman	150.00
A. Jorgenson, 2153 Keystone Ave., Lineman	150.00
H. Inglebright, 1039 Barry Ave., Lineman	150.00
Owen McLane, 6053 S. Halsted St., Acting Foreman Lineman	150.00
J. R. Weston, 4709 Harrison St., Lineman	150.00
P. B. Simonton, 218 So. Western Ave., Lineman	150.00
Dennis Nolan, 448 Root St., Groundman	100.00
Thomas Woods, 1244 Washington Blvd., Groundman	100.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer	205.63
E. Pearson, 1020 Roscoe St., Cable Splicer	203.88
J. J. Elliott, 1364 E. 61st St., Cable Splicer	202.13
H. J. Berninger, 414 S. Lincoln St., Cable Splicer	150.00
W. Brunsworth, 2921 W. 40th St., Cable Splicer	134.37
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer	145.63
T. O'Leary, 316 Aberdeen St., Laborer	140.85
A. J. Peck, 5010 Calumet Ave., Cable Splicer	209.95
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper	146.88
Thos. J. Healy, 4519 Washington Blvd., Cable Splicer Helper	135.63
Patrick Ryan, 3719 Colorado Ave., Cable Splicer Helper	47.50

Inside Maintenance and Construction Division.

Jos. Miller, 944 W. 51st Pl., Foreman, 19 days	110.08
Henry Haag, 2633 Monroe, Repairman	140.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	167.09
R. T. Kelley, 2921 Lowe Ave., Operator	115.00
John Weber, 2622 Fullerton Ave., Operator	115.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	115.00
Jos. Horejs, 2743 Clifton Park Ave., Asst. Repairman	115.00

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	225.00
R. G. Close, 513 E. 11th St., Lockport, Operator	165.00
B. F. Konapack, 502 Jasper Ave., Joliet, Operator	150.00

E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	150.00
Geo. Simmons, Lockport, Ill., Asst. Operator	130.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	150.00
V. A. Partz, 300 Sherman St., Joliet, Asst. Operator	130.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerburg, 103 Iowa Ave., Joliet, Machinist, 7 days	28.22
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	130.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	130.00
Robert Curry, 110 Katalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Ailer	125.00
A. Suffern, 324 Hunter Ave., Joiet, Asst. Machinist	125.00
P. J. McNamara, Lockport, Ill., Watchman	96.00
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	125.00
M. C. Rich, Lockport, Ill., Maintenance Man	125.00
M. Doyle, 238 Gardner St., Joliet, Ill., Machinist	52.41
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Joliet, Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Laborer	194.70
G. Johnson, Lockport, Ill., Laborer	140.00
P. Roach, Lockport, Ill., Laborer	137.75
J. Boza, Lemont, Ill., Laborer	64.75
M. Powalish, Lemont, Ill., Laborer	98.25
C. Barr, Lockport, Ill., Laborer	143.50
R. Leidig, Lockport, Ill., Laborer	117.75
D. Faletti, Joliet, Ill., Laborer	127.00
A. Rodighiero, Lockport, Il., Laborer	156.50
A. Erickson, 17th and Hamilton, Lockport, Laborer	130.00
P. Lyons, E. 17th St., Lockport, Laborer	156.00
Alf. Johnson, 18th and Jefferson, Lockport, Laborer	154.50
Chas. Carlson, 12th St., Lockport, Laborer	69.50

Terminal.

J. F. Vedder, 6834 Yale Ave., Dispatcher	165.00
W. J. Kloss, 3220 N. Sacramento Ave., Load Dispatcher	165.00
M. T. Coughlin, 434 E. 46th St., Load Dispatcher	165.00
J. S. Black, 6155 S. Laflin St., Load Dispatcher (Relief)	165.00
Edw. Held, 3429 Parker Ave., Switchboard Operator	140.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	140.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	130.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator, 24½ days	104.84
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	130.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	140.00

Blue Island.

Harriet Stephens, 65 New St., Blue Island, Clerk	55.00
Wm. H. Greene, 639 York St., Blue Island, Operator	110.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	110.00
Chas. Weber, 230 Walnut St., Operator	110.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	110.00
S. J. Cannon, 1309 Emerson St., Locktender and Janitor	100.00

A. Underdown, 706 Main St., Evanston, Operator..... 110.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator..... 110.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator..... 110.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator..... 165.00
Knute Anderson, 6324 Wentworth Ave., Operator..... 130.00
Frank C. Lambert, 5526 So. Lincoln St., Operator..... 130.00
E. P. Spriegel, 2451 Station St., Operator..... 130.00

Ashland Avenue.

W. J. Moylan, 2933 Shields Ave., Operator, 24½ days..... 78.07
C. J. Ward, 3001 S. Canal St., Operator..... 110.00
H. E. Reilly, 4445 Wallace St., Operator..... 110.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator..... 110.00
E. Martin, 1925 Otto St., Temporary Operator..... 110.00
Frank Davidson, 932 Rush St., Operator..... 110.00

West Twelfth Street.

W. E. Nancarrow, 4648 Warwick Ave., Operator..... 110.00
P. J. English, 3416 S. Marshfield Ave., Operator..... 110.00
E. P. DeBarr, 825 George St., Operator..... 110.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator..... 110.00
R. Hardell, 3142 N. Robey St., Engineer..... 140.00
P. Kacyerzewski, 2354 Elston Ave., Operator..... 110.00

Forest Park.

S. H. Reed, 2742 N. Crawford Ave., Operator..... 110.00
R. W. C. Newmann, 7416 Washington St., Operator..... 110.00
Thos. Podraza, 1363 W. Chicago Ave., Operator..... 110.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Engineer..... 20.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Engineer..... 10.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Engineer..... 10.00

Utility Equipment Division.

Chas. H. Kent, 3124 Lowe Ave., Superintendent..... 175.00
B. H. Stuber, 3029 Union Ave., Machinist..... 137.58
Chas. F. Larson, 6718 St. Lawrence Ave., Machinist..... 130.64
Paul Bassi, 2429 W. Superior St., Washer..... 96.00
Florence Casey, 4407 Normal Ave., Washer..... 96.00
James T. Patton, 1146 Jackson Blvd., Washer..... 96.00
Geo. B. Kelly, 834 N. Springfield Ave., Captain, Robert R..... 125.00
Thos. J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R..... 125.00
Geo. H. Gardner, 1732 Clifton Park Ave., Engineer, Robert R..... 125.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A..... 100.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur..... 110.00
John Dean, 607 Belden Ave., Chauffeur..... 110.00
J. Neckerman, 4411 Federal St., Chauffeur..... 110.00
John Creen, 3002 Emerald Ave., Chauffeur..... 110.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R..... 100.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur..... 110.00
Sidney McWhirter, 2020 Augusta St., Chauffeur..... 110.00

Temporary Roll—Architectural Division.

E. C. Geduldig, 3259 Lowe Ave..... 150.00
John F. Chopski, 921 W. 31st St., Bricklayer..... 162.50

Theo. Frantz, 5344 S. Winchester Ave., Laborer	128.00
Pat Conners, 10603 Lafayette Ave., Laborer	45.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Acting Foreman	175.00
A. R. Verschave, 7836 S. Carpenter St., Lineman	150.00
Wm. G. Zepp, 5749 Drexel Ave., Lineman	150.00
Frank Hobbs, 2704 Warren Ave., Lineman	150.00
Chas. Kaiser, 4548 W. 22nd St., Lineman, 15 days	75.00
G. J. Cushing, 210 S. Whipple St., Groundman	120.97
Thos. Lane, 5740 S. Lincoln Ave., Lineman	100.00
Frank Guibard, 5731 Aberdeen St., Lineman	150.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	150.00
John J. Dassie, 3616 W. 83rd St., Lineman	150.00
J. M. Kelly, 6147 Newberry Ave., Lineman	150.00
D. McAvoy, 3317 W. Madison St., Lineman	150.00
W. Glass 3738 Madison St., Lineman, 15 days	75.00
Michael Hogan, 1507 W. 76th Pl., Groundsman, 10 days	32.26
Jos. Allard, 3117 Normal Ave., Chauffeur	110.00
O. E. Moran, 2245 S. Western Ave., Lineman, 15 days	75.00
F. S. Allen, 4026 Washington Blvd., Lineman	150.00
Thos. J. Falls, 5561 Shields Ave., Lineman	150.00
Jas. F. Barry, 218 S. Western Ave., Lineman	150.00
T. A. Singer, 3718 Grand Ave., Lineman	150.00
Geo. Mitchell, 3159 Emerald Ave., Lineman	100.00
Peter Hart, 348 W. 30th St., Lineman	100.00
Nicholas Martin, 350 W. 30th Pl., Linman	100.00
P. L. Englert, 3038 Wallace St., Lineman	100.00
Thos. Cunningham, 937 W. 35th Pl., Lineman	100.00
Edw. W. Eckert, 3036 Lock St., Chauffeur, 15 days	55.00

Temporary Inside Maintenance and Construction Division.

Thos. Sheehan, 2476 Albany Ave., Repairman	140.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	140.00
H. J. O'Connell, 6157 Michigan Ave., Asst. Repairman	115.00
Total	$ 32,285.89
Grand Total	$ 87,522.11

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, FEBRUARY 20, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.
Published by Authority of the Board of Trustees of the Sanitary District of Chicago.

President Sergel took the Chair and, the roll being called there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

REPORTS OF OFFICERS.

The Clerk presented the following communication from the Attorney:

February, 17, 1919

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I transmit herewith stenographic copy of the hearing held April 18, 1917 before the Committee on Waterways of the Lower House of the General Assembly, relative to house bills No. 661 and No. 662, pertaining to the development of water power by the Sanitary District at Brandons Road.

I would recommend that this copy be filed in the Clerk's office so as to be accessible for ready reference.

Respectfully submitted,

C. ARCH WILLIAMS,
Attorney.

Ordered published and filed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance to which was referred bill for unpaid taxes for Lockport and DuPage townships in Will County for the year 1915, reports that a bill for an injunction to restrain the County Collector from collecting the said taxes was brought in the year 1916; that this case after being passed on in the lower court was passed on by the Supreme Court of Illinois and after considering the matter finds that the amount of taxes herein included, namely $51,611.49 is the amount due to the County Collector of Will County, in accordance with the decisions of the Supreme Court for the year 1915 and that in addition to this, there is due interest for each of the years 1916, 1917 and 1918, making the total amount due to the County Collector of Will County as shown by a bill prepared by the County Collector of Will County, hereto attached, to be $67,094.96.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chairman of the Committee of Finance of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to draw a warrant in the sum of $67,094.96 in favor of Benjamin Jones, County Collector of Will County, in payment of taxes and interest for the township of Lockport and DuPage in Will County for the year 1915.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February, 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, to which was referred bill for unpaid taxes for Lockport and DuPage townships in Will County for the year 1916, reports that a bill for an injunction to restrain the County Collector from collecting the said taxes was brought in the year 1916; that this case after being passed on in the lower court was passed on by the Supreme Court of Illinois and after considering the matter finds that the amount of taxes herein included namely $60,712.20 is the amount due to the County Collector of Will County in accordance with the decisions of the Supreme Court for the year 1916 and that in addition to this there is due interest for each of the years 1917 and 1918 making the total amount due to the County Collector of Will County as shown by a bill prepared by the County Collector of Will County hereto attached to be $72,854.64.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chairman of the Committee of Finance of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $72,854.64 in favor of Benjamin Jones, County Collector of Will County, in payment of taxes and interest for the townships of Lockport and DuPage County for the year 1916.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy Lawley, Littler, Mueller, Nance, and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 20, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, to which was referred bill for unpaid taxes for the year 1917 for Lockport and DuPage townships in Will County report, that the taxes for the years 1915, 1916 and 1917 for these townships was contested and that the Supreme Court passed on the liability of the Sanitary District for the taxes for the years 1915 and 1916. The bill hereto attached is in accordance with the decisions of the Supreme Court on the liability of the Sanitary District. Your Committee finds that there is due to the County Collector of Will County for taxes for the year 1917 for the townships of Lockport and DuPage, the sum of $62,639.87 plus interest addition in accordance with the bill made out by the County Collector of Will County hereto attached, making the total sum of $68,903.86.

Your Committee further finds that the Circuit Court of Will County in the proceeding that was brought to test the validity of the assessment of taxes for the year 1917 has entered a decree finding the amount of taxes due in accordance with the decisions of the Supreme Court on the tax appeal for the years 1915 and 1916 to be such sum above shown.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant in the sum of $68,903.86 in favor of Benjamin Jones, County Collector of Will County, in payment of taxes and interest for the townships of Lockport and DuPage for the year 1917.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 20, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of February payrolls, for payment on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

A. Guthrie & Co. (contract, Section 14, Calumet-Sag Channel extra work)	$ 197.36	
Augusta Rau Schwarz (rent)	12.00	
Josephine Eck (rent)	8.00	
Nash-Dowdle Company (work on Evanston intercepting sewer)	1,837.50	
		$ 2,054.86

Maintenance and Operation Account.

John McGillen, Clerk (freight paid I. C. R. R. hauling fuel to Lawrence avenue pumping station)	$ 144.32	
John McGillen, Clerk (freight paid I. C. R. R. hauling fuel to Thirty-ninth street pumping station)	78.12	
John McGillen, Clerk (freight charges paid C. M. & St. P. R. R. hauling fuel to Lawrence avenue pumping station)	18.00	
John McGillen, Clerk (expense of employe)	4.20	
Edwards & Bradford Lumber Company (coal, Thirty-ninth street pumping station)	2,068.99	
The Wm. H. Reid Company (oil)	459.43	
Nicholas & Bookwalter (repairing chain falls)	54.18	
American Supply Company (sanitary wipers)	25.94	
Theo. B. Robertson Products Company, Inc. (soap powder)	14.34	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Bissel Laundry (towel service)	1.53	
Parker's Towel Supply Company (towel service)	1.00	
		2,888.55

Law Department.

John Dailey (services rendered and expenses incurred in re Illinois Valley overflow cases)	$ 3,075.27	
Chiperfield & Chiperfield (retainer services rendered in re Illinois Valley overflow cases)	1,500.00	
The Fred J. Ringley Company (legal backs)	87.50	
Kalamazoo Loose Leaf Binder Company (transfer binder and sheets)	53.06	
Burr-Vack Company (binders, etc.)	40.70	
The Frank Shepard Company (subscription for year)	15.50	
Edward Thompson Company (federal statutes)	3.00	
		4,775.03

Clerical Department.

Burr-Vack Company (journal, etc.)	$ 43.02	
Burr-Vack Company (paper, pencils, etc.)	20.11	
A. B. Dick Company (stencil paper)	14.00	
Robert S. Leete & Co. (bond paper)	12.00	
John McGillen, Clerk (expenses of employe)	11.99	
Remington Typewriter Company (repairing machine)	1.50	
A. Hannibal (repairing office chair)	1.50	
		104.12

Treasury Department.

Cameron, Amberg & Co. (leaf bond register)	36.00

Police Department.

The C. H. Hanson Company (Marshal's star)	2.50

General Account.

Standard Oil Company (rental of main office)	$ 2,683.04	
John M. Smyth Company (inlaid linoleum)	450.67	
Amounts carried forward	$ 3,133.71	$ 9,861.06

Amounts brought forward	$ 3,133.71	$ 9,861.06
Fred Klein Company (printing Proceedings)	116.75	
Fred Klein Company (printing 1,000 official cards)	3.50	
Fred Klein Company (printing 1,000 official cards)	3.50	
Juergens & Andersen Company (three gold stars)	82.50	
Burr-Vack Company (Perfection calendar pad)	.35	
Wm. L. Corris (transcript hearings before House Committee on Waterways)	120.25	
		3,460.56
Electrical Department.		
John McGillen, Clerk (semi-monthly payroll)	$ 18,175.09	
John McGillen, Clerk (expenses of employe)	25.02	
John McGillen, Clerk (expenses of employe)	2.60	
Thornton-Claney Lumber Company (lumber)	394.64	
Electric Service Supplies Company (lightning arrestors)	284.24	
General Electric Company (transformers, etc.)	252.11	
The United States Aluminum Company (tie wire)	242.18	
Conroy Boiler & Tank Works (galvanized cross arm braces)	238.80	
Wadsworth-Howland Company (mixed paint, etc.)	202.23	
Burr-Vack Company (tension envelopes)	127.81	
Monarch Electric & Wire Company (conduit)	127.45	
Monarch Electric & Wire Company (copper wire)	24.50	
Commonwealth Edison Company (Mazda lamps)	121.03	
Commonwealth Edison Company (snap switches)	6.82	
Belden Mfg. Company (wire)	110.43	
Worthington Pump Machinery Corporation (repairing pumps)	108.65	
Weil Bros. (gate valves)	90.47	
Barrett Hardware Company (flat iron bar, etc.)	63.05	
Chicago Telephone Company (telephone service)	59.13	
Wilbur J. Connell (galvanized machine bolts, etc.)	27.99	
Standard Oil Company (changing location of lavatory)	25.61	
Boston Store (gloves)	18.00	
Joliet Transfer Company (hauling pipe)	14.00	
A. C. Miller (gasoline)	12.65	
Westinghouse Electric & Mfg. Company (current coil)	11.09	
R. Hanisch Sons Company (six large chamois)	10.78	
Burr-Vack Company (Le Pages glue)	7.20	
Burr-Vack Company (Le Pages glue, etc.)	6.33	
Western Electric Company (black elbows, etc.)	6.36	
Paragon Metal Products Company (bronze casting)	2.75	
Joliet Motor Company (weather strips, etc.)	2.37	
William O'Connell (wood rasp, etc.)	2.35	
		20,803.73
Real Estate Department.		
J. T. Parsons, Collector, Joliet, Ill. (taxes)		248.19
Miscellaneous Accounts.		
John McGillen, Clerk (payroll, Stockyards testing station)—		
Construction Account	$ 118.00	
Maintenance and Operation Account	36.00	
	$ 154.00	
John McGillen, Clerk (expenses of employe)—		
Maintenance and Operation Account	$ 1.75	
Clerical Department	22.60	
General Account	8.34	
Electrical Department	5.55	
	38.24	
		192.24
Grand Total		$ 34,565.78

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, February 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that in order to improve the efficiency of the electric service of the Sanitary District now supplied from the West 12th Street substation and to supply electricity for power purposes for the operation of the Evanston Sewage Disposal station and Calumet Sewage Pumping Station, it will be necessary to install new underground transmission cables and also it will be necessary to obtain certain additional cables to be held in stock to be used as needed. He further says that the price of copper at the present time is lower than it has been for several months and that in his opinion a better price can be obtained at the present time than will be the case later, when general business revives, and he requests that he be granted authority to prepare plans and specifications for furnishing said cable and the necessary cable ducts.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to prepare plans and specifications for the work above specified and when said plans and specifications are prepared that the Electrical Engineer present the same together with a report containing a statement of the time for the completion of such work and a tabulated estimate of the cost thereof, to the Committee on Engineering for its approval.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Samuel K. Markman, Attorney for the City of West Hammond, Ill., in which he states that at the regular meeting of the City Council of said city, held on January 23, 1919, he was directed to request the Board of Trustees of the Sanitary District to supply electric current to said city for lighting and to operate the sewage pumping station.

Referred to the Committee on Electrical Development.

The Clerk presented a communication from Daniel Sullivan, Commissioner of Highways, Township of Palos, Cook County, Ill., calling attention to an alleged dangerous condition of the floors of bridges constructed by the Sanitary District in said township, and requesting that they be repaired.

Mr. Littler moved that the Chief Engineer be directed to report on the condition of the bridges referred to, that the Attorney render an opinion on the liability of the Sanitary District to make said repairs, and that the matter be referred to the Committee on Engineering.

The motion prevailed.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Nance presented the following order:

CHICAGO, February 20, 1919.

WHEREAS, The Sanitary District of Chicago, in the operation of its various pumping stations, power houses, substations and automobiles requires large quantities of lubricating oils and gasoline yearly, the amounts expended for such oils and gasoline for the year 1918 having reached approximately the following figures: Oil, $7,577.86 and Gasoline, $7,928.49, and

WHEREAS, These oils and gasoline have been purchased on the open market at prevailing market prices, as the requirements of the District demanded, and

WHEREAS, it is probable that a considerable economy could be effected in such purchases by the District entering into a contract with the lowest bidder if bids were sought for the supplying of such oils and gasoline, therefore be it

Ordered, That the Clerk be, and he is hereby authorized and directed to prepare specifications for the purchase of lubricating oils and gasoline to supply the needs of the District for the remainder of the year 1919, to be delivered as required, and that he advertise for bids in accordance with the specifications so prepared.

Mr. Nance moved that the order be passed.

Mr. Lawley moved, as a substitute, that the order be referred to the Committee on Finance.

On roll call the substitute motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler Mueller, and Paullin—Eight.

Nays—Mr. Nance—One.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, FEBRUARY 27, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the Regular Meetings of February 6, February 13 and February 20, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of January, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR JANUARY, 1919

Balance on hand at date of last report		$ 1,760,822.29
Receipts.		
Electrical Department	$ 127,383.03	
Land Revenue Account	12,909.65	
Water Service Account	645.00	
Interest and Premium of Bonds	922.50	
Interest on Deposits	249.65	
Miscellaneous Structures, etc., and Equipment, Maintenance and Operation	86.08	
Interest on Bank Balance (Geo. M. Reynolds, Treas.)	2,251.29	
Interest on Bank Balance (Jas. M. Dailey, Chairman)	1.94	
Total cash received for month		144,449.14
		$ 1,905,271.43
Expenditures.		
Clerical Department	$ 2,582.66	
Law Department	6,642.41	
Electrical Department	38,915.38	
Treasury Department	222.83	
Police Department	6,801.92	
General Account	7,745.22	
Maintenance Account	31,602.66	
Construction Account	134,558.18	
Bond Account	421,000.00	
Bond, Interest and Premium Account	92,005.00	
Illinois & Michigan Canal and Illinois River Conditions Department	1,999.28	
Cost of Law Cases	820.00	
Real Estate Department	633.22	
Total cash disbursed	$ 745,528.76	
Balance this date in the Continental and Commercial National Bank	1,159,742.67	
		$ 1,905.271.43

GEORGE M. REYNOLDS,
Treasurer.
By J. R. WASHBURN,
Assistant Treasurer.

Chicago, February 19, 1919.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that in accordance with the terms of the contract dated September 7, 1916 (page 1146 of the Proceedings) between the Nash-Dowdle Company and the Sanitary District for the construction of the Evanston Intercepting Sewer Contract No. 1, the Sanitary District has retained from time to time as a reserve percentage 12½% of the sums due said contractor which on February 15, 1919, amounted to $79,586.04, which sum, by the terms of said contract was not to be paid said contractor until thirty (30) days after the completion of the entire work.

Your Committee further reports that said contractor has requested that it be paid from said reserve percentage the sum of $70,000.00 for the reason that the work under said contract has been practically completed and it also requests said payment to be made at this time in order to obviate the necessity of paying an additional premium on its bond and further requests that said bond be cancelled.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that he has thoroughly considered the condition of the work with the Engineers in the field in direct charge of the same; that said work is practically completed as stated by said contractor and that the interests of the Sanitary District will be completely safeguarded if the sum of $25,000.00 is retained by the Sanitary District as security for the full completion of said work and the bond given by said contractor for the faithful performance of said work is cancelled.

Your Committee having considered the matter is of the opinion that the request of said contractor should be granted in part and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to pay upon the voucher of the Chief Engineer to Nash-Dowdle Company, the sum of $54,586.04 out of the reserve percentage retained by the Sanitary District under the terms of said contract provided the surety on the bond of said contractor consents in writing that said payment is made, and it is further

Ordered, That the sum of $25,000.00 be retained by the Sanitary District from said reserve percentage as security for the faithful performance by said contractor of all the terms and conditions of said contract in lieu of said bond, provided, however, that the Nash-Dowdle Company furnish the Sanitary District with an affidavit by its proper officer that all materialmen, mechanics and workmen employed by said Company in performance of work under said contract have been paid in full and provided further that said Nash-Dowdle Company consents in writing to the retention by the Sanitary District of said sum of $25,000.00 in lieu of and in place of said bond, and it is further

Ordered, That when said affidavit and the consents in writing above referred to are furnished the Sanitary District by said Nash-Dowdle Company that then the bond heretofore furnished by said Company for the faithful performance of said work under said contract shall be considered cancelled and the Clerk of the District is hereby instructed to notify the surety on said bond to that effect.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT. A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—Mr. Sergel—One.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finace begs to report that the semi-annual interest on the twentieth and twenty-eighth issues of bonds of The Sanitary

District of Chicago, amounting to the sum of twenty-one thousand, eight hundred ($21,800.00) dollars falls due March 1, 1919, as follows:

$440,000.00 of the twentieth issue at four per cent	$ 8,800.00
$650,000.00 of the twenty-eighth issue at four per cent	13,000.00
	$21,800.00

Your Committee also reports that bonds of the sixteenth issue and semi-annual interest on the sixteenth issue of bonds of the Sanitary District of Chicago amounting to the sum of one hundred and twenty-five thousand, one hundred and twenty ($125,120.00) dollars falls due March 15, 1919, as follows:

Principal of 112 bonds numbered 26323 to 26434, both inclusive, of the sixteenth issue	$112,000.00
Six months interest on $656,000.00 of the sixteenth issue at four per cent	13,120.00
	$125,120.00

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, instructed to draw a warrant, payable to the order of the Treasurer of The Sanitary District of Chicago for the sum of one hundred and forty-six thousand, nine hundred twenty ($146,920.00) dollars, to pay the semi-annual interest due March 1, 1919, and the principal and semi-annual interest due March 15, 1919, on bonds of The Sanitary District of Chicago as follows:

Six months' interest on $440,000.00 of the twentieth issue at four per cent, due March 1, 1919	$ 8,800.00
Six months' interest on $650,000.00 of the twenty-eighth issue at four per cent, due March 1, 1919	13,000.00
The principal of 112 bonds numbered 26323 to 26434 both inclusive of the sixteenth issue, due March 15, 1919	112,000.00
Six months' interest on $656,000.00 of the sixteenth issue at four per cent, due March 15, 1919	13,120.00
Total bonds and interest	$146,920.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT. A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board the following grants of easements:

(a) From William B Greene and Anna Greene, his wife.

(b) From Anna Greene, widow, William B. Greene and Anna Greene, his wife, Franklin Greene and Emma D. Smith and John H. Smith, her husband.

(c) From Emma D. Smith and

John H. Smith her husband.
whereby said grantors, for the nominal consideration of $1.00 each grant to The Sanitary District of Chicago a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer, with appurtenances thereto, in the Desplaines River District, in, under and through certain real estate owned by said grantors. Said grants of easement permit the Sanitary District to transport material, equipment, excavated soil and debris over and across said property. The Sanitary District agrees to provide certain connections in said sewer for drainage purposes, subject to the approval of the Chief Engineer, otherwise the grants of easement are in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grants of easement which have been approved by the Chief Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago and the Clerk, be, and they are hereby authorized and directed to execute in duplicate said forms of easement which are hereto attached, same having been duly executed by said grantors.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT. A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, February 27, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of February payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll Last Half of February, 1919.

John McGillen, Clerk (general payroll)		$ 26,951.54

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 16.57	
Jas. O. Heyworth (labor and material constructing temporary timber dam, Calumet-Sag Channel)	4,144.12	
Jas. O. Heyworth (labor for operating pumping plant)	2,000.00	
Jas. O. Heyworth (labor for operating pumping plant)	550.00	
Jas. O. Heyworth (labor for operating pumping plant)	475.00	
Chicago Telephone Company (telephone service)	23.73	
Orrin Eames (rent)	20.00	
A. Guthrie & Co., Inc. (meals for men on construction of four machinery houses, Calumet-Sag Channel)	16.50	
Amounts carried forward	$ 7,245.92	$ 26,951.54

Amounts brought forward	$ 7,245.92	$ 26,951.54
Peth & Goeler (field work on Calumet sewer)	14.50	
Nelson Bros. Laundry Company (towel service)	2.00	
A. Guthrie & Co., Inc. (labor and material building machinery houses)	77.88	
A. Guthrie & Co., Inc. (labor removing old ties from Central Division track south of the Channel)	68.18	
A. Guthrie & Co., Inc. (labor removing old ties from Central Division track south of the Channel)	41.78	
A. Guthrie & Co., Inc. (labor)	7.79	
A. Guthrie & Co., Inc. (labor)	3.29	
Chicago, Rock Island & Pacific Ry. Company (District's proposition additional pay allowed under general order No. 27, to C. R. I. & P. Ry. employes on work in connection with construction of bridge to carry main line tracks across Calumet-Sag Channel)	15.98	
Nash Bros. (Contract No. 1, Desplaines river intercepting sewer)	22,866.90	
		30,344.22
Maintenance and Operation Account.		
John McGillen, Clerk (special roll, 39th St. Pumping Station)	$ 240.00	
John McGillen, Clerk (special roll, Lawrence Ave. Pumping Station)	89.03	
John McGillen, Clerk (freight charges paid I. C. R. R., hauling fuel to 39th St. Pumping Station)	212.91	
John McGillen, Clerk (freight charges paid C. M. & St. P. Ry., hauling fuel to Lawrence Ave. Pumping Station)	24.00	
Fairbanks-Morse & Co. (inspection and repairs)	308.90	
Power Coal Company (coal)	196.58	
Argo Summit Lumber Company (lumber)	187.94	
North Shore Ash Company (cartage charges)	158.40	
The Lunkenheimer Company (repairs to steam system, Lawrence Ave. Pumping Station)	73.99	
Frenzel Bros. (removing cinders)	66.00	
Worthington Pump & Machinery Corporation (repairs, Lawrence Ave. Pumping Station)	63.73	
Weil Bros. (1 valve faced and drilled)	45.79	
Commonwealth Edison Company (Mazda lamps)	44.46	
Wilbur J. Connell (corn brooms)	18.00	
Crane Company (repairs)	17.50	
Burr-Vack Company (pencils, etc.)	16.85	
Parker's Towel Supply Company (towel service)	16.20	
Weil Bros (pipe fittings)	14.90	
Central Furniture Repair Company (repairs to office furniture)	8.00	
Sterling Midland Coal Company (coal)	1,584.36	
Kirby Motor Trucking Company (cartage)	6.00	
Crerar, Adams & Co. (repair part)	4.48	
Geo. B. Carpenter & Co. (rope)	2.64	
Wilcoxson Coal & Coke Company (fuel for operating Lawrence Ave. Pumping Station, balance due on previous bill)	1.03	
		3,401.69
Law Department.		
Martin Delaney (services rendered and expenses incurred)		189 00
Clerical Department.		
Bentley, Murray & Co. (loose leaves, etc.)	$ 46.00	
The Berkshire Company (pads of cactus bond)	22.50	
Robert S. Leete & Co. (white bond paper)	11.00	
		79.50
Amount carried forward		$ 60,965.95

Amount brought forward		$ 60,965.95
General Account.		
Evening American Publishing Company (publishing Annual Appropriation Bill)	$ 1,713.60	
The Chicago Evening Post (publishing Annual Appropriation Bill)	1,647.00	
Wm. Preston (repairing lock on desk)	1.50	
		3,362.10
Electrical Department.		
John McGillen, Clerk (expenses of employe)	$ 6.36	
John McGillen, Clerk (weekly payroll)	637.20	
John McGillen, Clerk (weekly payroll)	197.80	
John McGillen, Clerk (right to maintain poles on C. B. & Q. property)	5.00	
Commonwealth Edison Company (electrical energy as per contract)	10,238.33	
Commonwealth Edison Company (Mazda lamps)	117.36	
Commonwealth Edison Company (Mazda lamps, etc.)	31.50	
Commonwealth Edison Company (Minerallac pipe straps)	4.63	
Chicago Telephone Company (telephone service)	349.14	
Chicago Telephone Company (telephone service)	22.65	
Chicago Telephone Company (telephone service)	6.95	
Commercial Tire & Auto Company (tires)	360.20	
Rhodes Metallic Packing Company (sets of packing)	331.04	
Wm. Heggie (second-hand railroad rail with angle bars)	198.77	
Union Petroleum Company (gasoline)	190.63	
Bentley-Murray & Co. (electric light bill forms)	131.25	
Bentley-Murray & Co. (duplicate cut-off orders)	45.75	
John Naghten & Co. (insurance charges)	130.96	
Belden Mfg. Company (wire)	128.48	
Monarch Electric & Wire Company (cross arms)	112.68	
Gibbons Bros. (tires)	99.25	
Royal Electric Mfg. Company (disconnecting switches)	82.08	
Chicago Brass Works (bronze generator rings)	81.00	
Auto Cape Top Company (top for Overland complete)	69.45	
Hydrox Company (water service)	64.00	
The National Atomizer Company (Macbeth atomizers)	60.00	
Chicago Engineer Supply Company (safety water columns, etc.)	43.77	
Henry Stuckart (Yale padlocks and flashlights)	36.00	
The Lord & Bushnell Company (lumber)	35.15	
H. M. Hooker Glass & Paint Company (white enamel and lard oil)	29.10	
South Park Commissioners (repairing pavement)	29.00	
American Blue Print Paper Company (tracing paper and cloth)	28.80	
Wilbur J. Connell (long handle spoons)	28.50	
Wilbur J. Connell (coal shovels, etc.)	22.10	
Wilbur J. Connell (galvanized machine bolts, etc.)	16.53	
Becker Bros. (overhauling Globe motor)	28.40	
Standard Oil Company (gasoline, etc.)	26.90	
The Texas Company (refund on invoices)	25.95	
Chas. Novak & Son (glass, etc.)	23.17	
Naugle Pole & Tie Company (cedar poles)	22.70	
The Texas Company (gasoline and kerosene)	22.23	
Morton Salt Company (rock salt)	21.70	
H. W. Johns-Manville Company (cement)	21.60	
The Garden City Sand Company (cement)	20.94	
The Essenkay Products Company (repairing)	20.00	
The Davies Supply Company (pipe)	19.27	
Western Electric Company (Mazda lamps, etc.)	16.77	
Stewart-Warner Speedometer Corporation, fibre pinions, etc.)	16.04	
Amounts carried forward	$ 14,257.08	$ 64,328.05

Amounts brought forward	$ 14,257.08	$ 64,328.05
David G. Murray (teaming charges)	16.00	
Advance Forging & Tool Works (picks, etc.)	15.05	
Geo. L. Hammons, Inc. (stock drills, etc.)	14.86	
Theo. B. Robertson Products Company, Inc. (soap powder)	13.90	
Stebbins Hardware Company (Barler heater, etc.)	13.79	
H. Channon Company (counter duster, etc.)	12.94	
Auto Radiator Mfg. Company (Overland radiator repaired)	11.75	
Weil Bros. (bushings, etc.)	11.29	
Burr-Vack Company (Gem clips, etc.)	9.44	
Ackerman-Johnson Company (expansive screw anchors)	9.41	
Scully Steel & Iron Company (flatirons, etc.)	9.19	
Marshall Field & Co. (cheesecloth)	8.64	
Bentley-Murray & Co. (trip blanks)	238.00	
Westinghouse Electric Mfg. Company (brass wire, etc.)	7.06	
R. Hanisch Sons Company (cross links)	6.15	
Air Reductions Sales Company (auto tanks)	6.00	
Electric Appliance Company (valve cores)	4.80	
Chicago Engineer Supply Company (steel engine torches)	4.65	
Henry M. Joda (galvanized corrugated iron)	4.48	
Crane Company (steam cock, etc.)	4.01	
Fuller-Morrison Company (Stearine)	3.41	
International Harvester Company (pressure spider, etc.)	3.19	
The White Company (large reflex porcelains)	3.09	
Advance Packing & Supply Company (keg scrub brushes)	3.00	
Westinghouse Electric & Mfg. Company (freight on empty drums)	2.29	
Belden Mfg. Company (cover discount deducted in error)	1.69	
Pittsburgh Transformer Company (coils with insulation)	1.69	
Addressograph Company (plates and cards, etc.)	.90	
		14,697.75

Miscellaneous Accounts.

John McGillen, Clerk (special roll, repairs to walls, Main Channel bridges, Desplaines river bridges, Controlling Works, building scow and wrecking Stockyards Testing Station)—			
Construction Account	$ 39.00		
Maintenance and Operation Account	449.00		
Electrical Department	131.40		
		$ 619.40	
E. H. Heilbron (expenses of employes)—			
Illinois Valley Department	$ 81.81		
Law Department	35.60		
		117.41	
E. H. Heilbron (expenses of employes)—			
Illinois Valley Department	$ 40.62		
Law Department	20.44		
		61.06	
			797.87
Grand Total			$ 79,823.67

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance (*except as to voucher of the Commonwealth Edison Company, for electrical energy as per contract, $10,238.33, on which Mr. Nance voted "nay"*) and Paullin—Seven (on all vouchers, and eight on all vouchers not excepted).

Nays—None (*except as above stated*).

Passed and not voting—Mr. Sergel—One.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on November 14, 1915 (page 1476 of the Proceedings) James O. Heyworth entered into a contract with the Sanitary District for the excavation and collateral work on contract section 13 of the Calumet-Sag Channel which contract, was on December 2, 1915 (page 1741 of the Proceedings) with the consent of the Sanitary District and the surety on the bond of said James O Heyworth assigned to A. Guthrie & Co. Inc.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the work of excavating and constructing said section 13 was delayed by war conditions and also because the Sanitary District was unable for a long time after said contract was awarded to come to an agreement with the various railroads for the construction of bridges across the Calumet-Sag Channel so that said contractor could not proceed with its work in the manner it had planned. Because of said delays this section cannot be fully completed before the end of 1920 unless some arrangements can be made with said contractor to complete said work in a different and more expeditious manner.

The Chief Engineer further states that there remains to be excavated between the right of way of said railroads and the east end of section 12 of said Calumet-Sag Channel about 64,000 cubic yards of glacial drift and rock, a large portion of which will be needed to backfill behind the channel walls east of the right of way of said railroads; that it is entirely feasible to place a plant west of the right of way of said railroads, excavate the material in said strip and store the same upon the spoil area and then, after the channel walls have been completed to transport this material by cars underneath the railroad bridges and place said material back of the walls.

He further states that by the terms of said contract, said contractor has the right to perform said work by the method it is now using and if this method is changed the contractor will be put to a large extra expense in installing an additional plant for the excavation work and placing concrete and backfilling, but by changing the work in the manner above suggested, there will be at least a years time saved to the public in the opening of the Calumet-Sag Channel. He further states that said contractor has offered to do all the necessary work by the new method suggested at an additional cost to the Sanitary District of fifty-five cents per cubic yard for excavating the material in said strip of land lying west of the right of way of said railroads and backfilling which he estimates will total the sum of about $35,000.00 and he strongly recommends that he be authorized to accept said offer of A. Guthrie & Co. Inc. to perform said work on the basis specified as an extra under the extra work clause

of its contract for the excavation and collateral work on section 13 of the Calumet-Sag Channel.

Your Committee, having considered the matter, is of the opinion that in view of the fact, the delay in the completion of the Calumet-Sag Channel is costing the taxpayers of the Sanitary District the interest on the money already invested in said work which is at least $1,000.00 per day, it is advisable that said work should be done in the manner suggested by the Chief Engineer and recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to accept the offer of A. Guthrie & Co. Inc. to perform the work above specified by the method suggested by the Chief Engineer at the price stated as an extra under the extra work clause of its contract for the excavation and collateral work on section 13 of the Calumet-Sag Channel.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Clark, Healy, Lawley, Littler, Mueller and Paullin—Six.

Nays—Messrs. Sergel and Nance—Two.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary, during the ensuing year, to repair and renew the floors and to paint the bridges across the North Shore Channel, in some cases to reinforce the foundation of said bridges and to maintain and repair other miscellaneous structures along said channel.

Your Committee further reports that it is advised that said work will be done from time to time by purchasing in the open market, small quantities of lumber, paint, crushed stone or gravel, cement and other material and supplies in no instance, at a cost to exceed $500.00 and the labor in performing said work will be furnished by the employees of the Sanitary District or by the employment of labor on a per diem basis, at a total estimated cost of $15,000.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to perform the work above specified on the basis stated, provided the cost of the same shall not exceed the sum of $15,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary, during the ensuing year, to repair and renew the floors and to paint the bridges across the Main Channel, in some cases to reinforce the foundations of said bridges and to maintain and repair other miscellaneous structures along said channel.

Your Committee further reports that it is advised that said work will be done from time to time by purchasing in the open market, small quantities of lumber, paint, crushed stone or gravel, cement and other materials and supplies, in no instance, at a cost to exceed $500.00 and the labor in performing said work will be furnished by the employees of the Sanitary District or by the employment of labor on a per diem basis, at a total estimated cost of $20,000.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to perform the work above specified on the basis stated, provided the cost of the same shall not exceed the sum of $20,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary, during the ensuing year, to repair the roadway approaches to various highway bridges across the Calumet-Sag Channel.

Your Committee further reports that it is advised that said work will be done from time to time by purchasing in the open market, small quantities of crushed stone or gravel at a cost in no instance in excess of $500.00, and the necessary labor will be performed by the employees of the Sanitary District or by other parties on a per diem basis, at a total estimated cost for labor and material of $3,000.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to perform the work above specified on the basis stated, provided the cost of the same shall not exceed the sum of $3,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary to overhaul and repair two of the large scows now used by the Sanitary District in repair work on the walls of the main channel. He further states that the amount of work to be done on said scows cannot be ascertained until said scows are placed in dry dock or hauled upon the banks of some ship yard equipped to do marine repair work. He further states that it will be difficult to obtain bids for doing said work except on a force account basis and he requests that he may prepare specifications for doing said work on the basis of paying the actual cost of the labor and material entering into said work.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to prepare specifications to do the work above specified and when said specifications are prepared that the Chief Engineer present same to your Committee on Engineering for its approval.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on November 14, 1918 (page 1243 of the Proceedings) entered into a contract with the Nash-Dowdle Company for furnishing, delivering and erecting the building, pumping machinery, electric equipment, switch board, conduit and wiring of the Evanston Sewage Pumping Station as specified under Divisions A, B, C and D of said contract.

Your committee further reports that it has received a communication from the Chief Engineer in which he states that the specifications under Division B provide that "the pumps will be built at New Orleans, La., in the shops of the Dibert, Bancroft & Ross Co.", and the contractor requests that the specifications be changed so as to read "the pumps will built at Aurora, Ill., in the shops of the American Well Works",

and the Chief Engineer states that he does not object to said change in the specifications.

Your Committee further reports that the Attorney is of the opinion that from an examination of the correspondence heretofore had between said contractor and the Dibert, Bancroft & Ross Co. said Nash-Dowdle Company is not obligated in any way to award said contract to the said Dibert, Bancroft & Ross Co. and your Committee is of the opinion that the request of said contractor to make said change in the specifications be granted, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to change said contract between The Sanitary District of Chicago and the Nash-Dowdle Company in the particular above specified, provided said contractor and the surety on its bond consent in writing to such change.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the work of excavation and construction of section 1 of the Calumet-Sag Channel is so far advanced that the connection between said channel and the Main Channel of the Sanitary District, will be made within the next month, thereby admitting the water from the Main Channel into the west 12 miles of the Calumet-Sag Channel. He further states that when said connection is made, it will be necessary to connect certain farm drainage ditches with the Calumet-Sag Channel, to remove two flumes, construct about 800 cubic yards of rip-rapping, and perform certain minor work at an estimated cost of $15,000.00 to be expended for the necessary teams and labor, on a per diem basis.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to perform the work above specified on the basis stated, provided the cost of the same shall not exceed the sum of $15,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to construct a scow to be used in connection with dredging the forebay at the Power House at Lockport, at an estimated cost of $650.00 for lumber and other material, and $550.00 for labor.

He further states that the work of constructing said scow will be done by the regular employees of the Sanitary District, and the necessary lumber and material which is of several grades will be purchased in the open market, from time to time, as needed for the lowest prices obtainable.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to have the work above specified performed on the basis stated, provided the total cost of the same shall not exceed the sum of $1,200.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on December 31, 1918 (page 1606 of the Proceedings) ratified the action of the Chief Engineer in employing Modjeski and Angier to inspect the structural steel for the Calumet Sewage Pumping Station at a cost of not to exceed $200.

Your Committee further reports that said sum has not been expended and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized to pay Modjeski and Angier the sum of not to exceed $200.00 for performing the work above specified.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on August 1, 1918, authorized the Chief

Engineer to build four pressed brick houses in which to install the machinery for operating of the gates of the Controlling Works on the east end of the Calumet-Sag Channel, at a cost of not to exceed the sum of $5,000.00.

Your Committee further reports that it received a communication from the Chief Engineer in which he states that he has expended the sum of $4,000.00 from said appropriation and that it will be necessary in the ensuing year, to expend the sum of $500.00 to complete said work and he requests that he may be authorized to perform the balance of said work at a cost of not to exceed $500.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to complete the construction of said machinery houses at a cost of not to exceed $500.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it is necessary to purchase piles to be used for temporary trestles for carrying certain railroad tacks of the Chicago, Rock Island, & Pacific Railway Company in connection with the new bridges to be constructed by the Sanitary District across the Calumet-Sag Channel in the City of Blue Island, at an estimated cost of $500.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to purchase in the open market for the best price obtainable, the piles above specified, provided the cost of the same shall not exceed the sum of $500.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board of February 20, 1919 (page 196 of the Proceedings) authorized the Electrical Engineer to prepare specifications for furnishing and delivering lead covered cable to be used in improving the efficiency of the electric service of the

Sanitary District now supplied from the West 12th street substation and for other purposes.

Your Committee further reports that the Electrical Engineer has prepared specifications for the purchase of such cable, and has presented the same to your Committee for its approval.

Your Committee further reports that it has considered said specifications prepared by the Electrical Engineer, has approved same, and, therefore, recommends the passage of the following order:

Ordered, That the specifications prepared by the Electrical Engineer for furnishing and delivering lead covered cable be, and the same are hereby approved, and it is further

Ordered, That the Clerk be, and he is hereby authorized and directed to advertise for bids for furnishing and delivering said cable in accordance with the specifications so prepared by the Electrical Engineer.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on April 25, 1918 (page 277 of the Proceedings) authorized the Chief Engineer to purchase in the open market for the lowest price obtainable, certain bridge stringers, cap ties and other trestle timbers for the approaches of bridges to be constructed by the Sanitary District for certain railroad companies across the Calumet-Sag Channel provided the cost of the same should not exceed the sum of $4,000.00 which sum was afterwards, on September 5, 1918 (page 1052 of the Proceedings) increased to $6,000.00.

Your Committee further reports that it is advised that under the terms of the contract, dated November 2, 1916 (page 1442 of the Proceedings) between the Sanitary District and the railroad companies, the Baltimore & Ohio Chicago Terminal R. R. Co. agreed to furnish said material for said bridges but the Sanitary District reserved the right to furnish such material at less cost, which can be done by purchasing second hand material.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that he has expended during the year 1918, the sum of $2,500.00 from said appropriation and he requests that he may be authorized to expend from time to time during the ensuing year as the occasion arises, the sum of $3,000.00 in the purchase of the various kinds of material, provided no purchase at any one time shall be in excess of $500.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized to purchase in the open market, for the lowest price obtainable in the manner specified, the second hand material above described,

provided the total cost of the same shall not exceed the sum of $3,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER.
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

New Appointments—Provided for in 1919 Budget.

Electrical Department —

Walter E. Jones, Meter Inspector, $140.00 monthly.

Sam Fleik, Cement Finisher, temporary, 57½c per hour.

John Deitch, Cement Finisher, temporary, 57½c per hour.

Engineering Department—

A. M. Finkel, Bridge Tracer, $150.00 monthly.

Increases—Provided for in 1919 Budget.

Electrical Department—

J. Rodighiero, from Laborer Foreman at 60c per hour, to General Utility Man at Power House, 70c per hour.

Reinstatements Due to honorable discharge from the U. S. Army or Navy Service.

Electrical Department—

R. L. Walsh, Electrician, $155.00 monthly.

Fred Dushek, Lineman, $165.00 monthly.

H. C. Peterson, Assistant Repairman, $130.00 monthly.

Engineering Department—

Murray Blanchard, Assistant Engineer, $250.00 monthly.

E. R. Richards, Draftsman, $150.00 monthly.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
H. E. LITTLER.
MATT. A. MUELLER,
JAS. H. LAWLEY,
WALLACE G. CLARK,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Illinois Valley.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 14, 1905, Henry J. Kiner brought suit for $7,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County for permanent damages to 102 acres of land situated in said County about two miles east of the City of Marseilles by reason of overflow caused by the turning of water

from Lake Michigan into the Main Channel and thence into the Des Plaines and Illinois Rivers.

Your Committee further reports that it has been negotiating with Mr. Andrew J. O'Conor, Attorney for the said plaintiff, and with the said plaintiff, and has reached an agreement with them that the said case might be settled for the sum of $1,000.00.

Your Committee having considered the matter, is of the opinion that the above is a fair and reasonable settlement, and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby authorized and directed to draw a warrant in the sum of $1,000.00 payable to Henry J. Kiner, and deliver the same to him upon the execution and delivery by him of a release satisfactory to the Attorney of the Sanitary District releasing The Sanitary District of Chicago from all past, present and future damages to the land described in the declaration filed in said suit, and upon the dismissal of said suit, without costs, including Attorney's fees.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.
WILLIS O. NANCE,
H. E. LITTLER.
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 14, 1905, Norman McFarran brought suit for $4,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County, for permanent damages to 53.83 acres of land situated in said County opposite the City of La Salle, by reason of overflow caused by the turning of water from Lake Michigan into the Main Channel, and thence into the Des Plaines and Illinois Rivers.

Your Committee further reports that it has been negotiating with Mr. Andrew J. O'Conor, Attorney for said plaintiff, and has reached an agreement with him that said case might be settled for the sum of $1,383.00.

Your Committee having considered the matter is of the opinion that the above is a fair and reasonable settlement, and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby authorized and directed to draw a warrant in the sum of $1,383.00 payable to Norman McFarran, and deliver the same to him upon the execution and delivery by him of a release satisfactory to the Attorney of the Sanitary District releasing The Sanitary District of Chicago from all past, present and future damages to the land described in the declaration filed in said suit, and upon the dismissal of said

suit without costs, including attorney's fees.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.
WILLIS O. NANCE,
H. E. LITTLER.
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 14, 1905, Emma C. McCaleb brought suit for $10,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County, for permanent damages to eighty acres of land situated in said County opposite the City of Peru, by reason of overflow caused by the turning of water from Lake Michigan into the Main Channel and thence into the Illinois and Des Plaines Rivers.

Your Committee further reports that said plaintiff, through her attorney, has offered to settle said suit for the sum of $1,200.00, which, in the opinion of Committee, is a fair and reasonable settlement.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be and they are hereby, authorized and directed to draw a warrant in the sum of $1,200.00 payable to Emma C. McCaleb, and deliver the same to her upon the execution and delivery by her, of a release satisfactory to the Attorney of the Sanitary District, releasing The Sanitary District of Chicago, from all past, present and future damages to the land described in the declaration filed in said suit, and upon the dismissal of said suit, without costs, including attorney's fees.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.
WILLIS O. NANCE,
H. E. LITTLER.
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 14, 1905, Adele Ellingen, Administratrix of the estate of Peter Ellingen brought suit for $3,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County for permanent damages to 22.9 acres of land situated in said County opposite the City of La

Salle, by reason of overflow caused by the turning of water from Lake Michigan into the Main Channel and thence into the Des Plaines and Illinois Rivers.

Your Committee further reports that Adele Ellingen the plaintiff, since bringing the said suit has died and that the sole reversioner and party in interest in the said suit under the last Will and Testament of Peter Ellingen, deceased, is William J. Parks.

Your Committee further reports that it has been negotiating with Andrew J. O'Conor, Attorney for the party in interest in said suit, and has reached an agreement with him that said case might be settled for $687.00, which, in the opinion of your Committee is a fair and reasonable settlement. Your Committee therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago and the Clerk, be, and they are hereby authorized and directed to draw a warrant in the sum of $687.00 payable to Duncan & O'Conor, Attorneys for William J. Parks, and deliver the same to them upon the execution and delivery by William J. Parks of a release, satisfactory to the Attorney for The Sanitary District, releasing The Sanitary District of Chicago from all past, present and future damages to the land described in the declaration filed in said suit and upon the dismissal of said suit without costs, including Attorneys fees.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.

H. E. LITTLER.
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 14, 1905, Catherine S. Gilbert brought suit for $4,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County, for permanent damages to forty acres of land situated in said County about one mile above the City of La Salle, by reason of overflow caused by the turning of water from Lake Michigan into the Main Channel and thence into the Des Plaines and Illinois Rivers.

Your Committee further reports that it has been negotiating with Mr. Andrew J. O'Conor, Attorney for the said plaintiff, and with the said plaintiff, who have appeared before this Committee, and that it has reached an agreement with them that said case might be settled for the sum of $1,600.00.

Your Committee having considered the matter, is of the opinion that the above is a fair and reasonable settlement and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they

are hereby, authorized and directed to draw a warrant in the sum of $1,600.00, payable to Catherine S. Gilbert, and deliver same to her upon the execution and delivery by her of a release satisfactory to the Attorney of The Sanitary District releasing The Sanitary District of Chicago, from all past, present and future damages to the land described in the declaration filed in said suit, and upon the dismissal of said suit without costs, including attorney's fees.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.

WILLIS O. NANCE,
H. E. LITTLER.
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, February 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 16, 1905, Jane Skelly brought suit for $15,000.00 against The Sanitary District of Chicago in the Circuit Court of La Salle County, for permanent damages to about 106 acres of land situated in said County opposite the City of La Salle, by reason of overflow caused by the turning of water from Lake Michigan into the Main Channel and thence into the Des Plaines and Illinois Rivers.

Your Committee further reports that it has been negotiating with Mr. Andrew J. O'Conor, Attorney for the said plaintiff, and with the said plaintiff, and has reached an agreement with them that the said case might be settled for $3,701.95.

Your Committee having considered the matter is of the opinion that the above is a fair and reasonable settlement and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago and the Clerk, be, and they are hereby, authorized and directed to draw a warrant in the sum of $3,701.95 payable to Jane E. Skelly, and deliver the same to her upon the execution and delivery by her of a release satisfactory to the Attorney of The Sanitary District, releasing The Sanitary District from all past, present and future damages to the land described in the declaration filed in said suit, and upon the dismissal of said suit without costs, including attorney's fees.

Respectfully submitted.

MATT. A. MUELLER,
Chairman.

WILLIS O. NANCE,
H. E. LITTLER.
GEORGE W. PAULLIN,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Payroll of The Sanitary District of Chicago for the Month of November, 1918.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakenwald Ave., President of Board	$ 625.00
Fred D. Breit, 5700 Washington Blvd., Trustee, 3 days	40.32
James M. Dailey, 549 W. 31st St., Trustee, 3 days	40.32
Wm. J. Healy, 716 W. Madison St., Trustee, 27 days	376.34
Harry E. Littler, 2505 N. Washtenaw Ave., 27 days	376.34
Willis O. Nance, 30 N. Michigan Ave., Trustee, 27 days	376.34
Charles E. Reading, 11520 S. Michigan Ave., Trustee, 3 days	40.32
Wallace G. Clark, 30 N. Michigan Ave., Trustee	416.67
George W. Paullin, 30 N. Michigan Ave., Trustee	416.67
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.67
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.67
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.67
Wm. B. Foley, 819 Independence Blvd., Secretary to President	250.00
Total	$ 4,208.36

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division.

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7950 Harvard Ave., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 So. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	120.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	130.00

Accounting and Record Division.

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Record Clerk	160.00
G. A. Kelly, 436 Homan Ave., Budget Bookkeeper	150.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Jas. T. Graham, 3115 S. Union Ave., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Louise L. Levy, 4817 Prairie Ave., Stenographer	100.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier	125.00
Total	$ 4,361.67

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Edward Keeley, 2816 N. Francisco Ave., Manager	$ 300.00
Frances Rodney, 537 E. 34th St., Secretary	135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 560.00

DEPARTMENT OF LAW.

Edmund D. Adcock, 4800 Dorchester Ave., Attorney	$ 916.66
Ross C. Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	441.67
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst. Attorney	500.00
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
George F. Mulligan, 228 S. Mayfield Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	225.00
George H. Hough, 500 Diversey Parkway, Asst. Attorney	250.00
Matilda M. Lynn, 5343 Kenmore Ave., Voucher Clerk and Bookkeeper	125.00
John J. Gaynor, 5215 Washington Blvd., Investigator	175.00
James A. Kearns, 21 W. Garfield Blvd., Law Clerk	200.00
Patrick J. Sheehan, 818 N. Clark St., Investigator	125.00
Irene Mueller, 5017 S. Wood St., Stenographer	110.00
Miriam Ehrlich, 3129 S. Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	175.00
Total	$ 7,161.65

DEPARTMENT OF POLICE.

John F. O'Neill, 7927 S. Morgan St., Marshal	$ 250.00
Joseph Kennefick, 3907 Emerald Ave., Sergeant	125.00
James Haggerty, 3201 Princeton Ave., Sergeant	125.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	125.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	115.00
Daniel D. Curtin, 3313 W. Madison St., Patrolman	115.00
Sylvester O'Brien, 7318 Langley Ave., Patrolman	115.00
Michael Plunkett, 100 S. Sangamon St., Patrolman	115.00
Joseph F. Ring, 1210 N. Halsted St., Patrolman	115.00
James B. Walsh, 65 E. 42nd St., Patrolman	115.00
Emil Klank, 3616 S. Western Ave., Patrolman	115.00
Matthew Tychsen, 812 Massasoit Ave., Patrolman	115.00
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	115.00
Edward Morrissey, 157 N. Sheldon St., Patrolman	115.00
Tony Alessi, 2547 Wallace St., Patrolman	115.00
Anton J. Stasch, 2938 N. Springfield Ave., Patrolman	115.00
Frank Uczciwek, 1226 Cleaver St., Patrolman	115.00
Anthony Intrieri, 914 W. Polk St., Patrolman	115.00
Wm. Moran, 6229 S. Lincoln St., Patrolman	115.00
John J. Burke, 1252 S. Keeler Ave., Patrolman	115.00
John Conlon, 360 Wendel St., Patrolman	115.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	115.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	115.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	115.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	115.00
R. J. Dooley, 2146 W. 21st Pl., Patrolman	115.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	115.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	115.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	115.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	115.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	115.00
John E. Pierce, 4080 S. Wells St., Patrolman	115.00
Frank Timoney, 732 N. Leavitt St., Patrolman	115.00
James Mooney, 3450 Walnut St., Patrolman	115.00

Herman Tabbert, 1723 Hastings St., Patrolman	115.00
Henry D. Lynch, 5635 S. Wood St., Patrolman	100.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	115.00
Charles A. Ison, 5926 S. Wood St., Patrolman	115.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	115.00
Denis McCaffrey, 3919 Jackson Blvd., Patrolman	115.00
Patrick H. Leahy, 2744 Wentworth Ave., Patrolman	115.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	100.00
Frank Kouba, 656 W. 18th St., Patrolman	100.00

Temporary Employes.

John J. Gleason, 3026 Emerald Ave., Patrolman	115.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	115.00
A. J. McVady, 6432 Drexel Ave., Patrolman	115.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
Peter J. Trenz, 1931 Cuyler Ave., Patrolman	115.00
Geo. E. Paul, 4309 N. Ridgeway Ave., Patrolman	115.00
Louis Lorentzen, 3637 N. Sawyer Ave., Patrolman	107.50
George A. Keller, 2820 Warren Ave., Patrolman	107.50
J. T. Johnson, Lemont, Ill., Patrolman	107.50
Barney Klecka, 1853 S. Western Ave., Patrolman	107.50
Chas. R. Fross, 801 E. 41st St., Patrolman	100.00
Michael Conway, 1944 N. Lincoln St., Patrolman	100.00
Thos. Tyrell, 4107 S. Ashland Ave., Patrolman, 21 days	70.00
G. Harell, 5634½ Maryland Ave, Patrolman	100.00
Total	$ 6,785.00

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 500.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	250.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	175.00
O. W. Boers, Chillicothe, Ill., Draftsman	175.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	145.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	120.00
L. H. Welcome, 553 W. 35th St., Computor	115.00
Joseph McAvoy, 3802 Union Ave., Rodman, 15 days	50.00
John Markham, 1243 Foster Ave., Rodman	100.00
Total	$ 1,630.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 6.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	5.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	6.00
Joseph Limacher, Minooka, Ill., Gauge Reader	5.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
William Camegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
Sam G. Belt, 106 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	10.00
John Brookman, Seneca, Ill., Gauge Reader	5.00
George A. Campbell, Marseilles, Ill., Gauge Reader	5.00
Noah Morial, Marseilles, Ill., Gauge Reader	5.00
James McGrogan, Dayton, Ill., Gauge Reader	6.00
C. H. Barnard, C. B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	10.00
George Keeley, Wilmington, Ill., Gauge Reader	5.00
John F. Alt ,County Asylum, Ottawa, Ill., Gauge Reader	5.00

Bernard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	6.00
Peter DeGroot, Peru, Ill., Water Sampler and Gauge Reader	10.00
Henry Harbeck, Utica, Ill., Gauge Reader	5.00
David Gleason, DePue, Ill., Gauge Reader	5.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	5.00
Philip Riley, Lacon, Ill., Gauge Reader	5.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	5.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	5.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	5.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	5.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	5.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	5.00
William LeTissier, Bath, Ill., Gauge Reader	5.00
W. L. Waters, Browning, Ill., Gauge Reader	5.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	5.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader, 2 months	5.00
Total	$ 169.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	375.00
Philip Harrington, 500 Diversey Pkway., Division Engineer	375.00
E. L. Cooley, 2136 Indiana Ave., Asst. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Junior Engineer	175.00
J. T. Soderstam, 1211 Newport Ave., Draftsman	175.00
Fred W. Kirk, 68 E. 56th St., Draftsman	160.00
M. P. Williams, 2749 Washington Blvd., Draftsman	160.00
R. G. Galke, 1834 Eddy St., Draftsman	160.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
L. W. A. Bunge, 418 N. Taylor Ave., Oak Park, Asst. Mech. Eng	150.00
Rudolph Christoph, 2139 Melrose St., Superintendent	150.00
Nellie McArdle, 8019 Green St., Stenographer	110.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	125.00
Clarence E. Wilson, 2817 N. Clark St., Rodman	115.00
Edwin C. Crowe, 2318 N. Kenneth Ave., Tracer	85.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	275.00
Ingolf Erdal, 1504 S. 4th Ave., Maywood, Bridge Computer	200.00
Edwin A. Howes, 5340 Windsor Ave., Bridge Computer	200.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Computer	200.00
Richard DeYoung, 10226 State St., Bridge Draftsman	190.00
E. F. Doud, 418 E. 64th St., Instrument Man	150.00
Stanley A. Jankowski, 3222 Wall St., Sub Instrument Man	130.00
F. E. Helmick, 6030 Union Ave., Sub Instrument Man	130.00

Record Division.

Theodore Buskirk, 3903 Ellis St., Resident Engineer	175.00
W. T. Lynch, 5643 Wayne Ave., Record Clerk	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	160.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Computer	130.00
Otto Gnewuch, 2303 S. Dearborn St., Computer	120.00
Fred H. Busse, 3936 N. Oakley Ave., Computer	120.00
E. Edinger, 3259 Indiana Ave., Clerk	115.00
Edna Burke, 11349 Indiana Ave., Stenographer	110.00

John F. Harper, 311 E. 45th St., Stenographer	110.00
Geo. Neupert, 75 W. Jackson Blvd., Inspector	120.00

Hydraulic Measurements Division.

John D. O'Donnell, 1048 W. 15th St., Rodman	115.00
Total	$ 8,396.66

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
John A. Kozinski, 8636 Exchange Ave., Instrument Man	150.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Wm. J. Jaeger, 3028 Emerald Ave., Sub Instrument Man	130.00
John Murphy, 3740 Emerald Ave., Rodman, 24 days	88.17
Joseph J. Kelly, 3155 Union Ave., Rodman	115.00
Wm. C. Snyder, 2245 N. Keeler Ave., Inspector	115.00
Frank Palermo, 7037 S. Hermitage Ave., Launch Engineer	115.00
Total	$ 1,326.50

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 500.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer, 28 days	225.00
L. C. Whittemore, 1216 East 54th St., Asst. Sanitary Engingeer	250.00
John R. Palmer, 724 Custer Ave., Evanston, Asst. Chemist, 15 days	57.50
Herbert Swanson, 903 N. Central Ave., Asst. Chemist	115.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Junior Engineer	$ 175.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
Walter M. DeBerard, 1418 Howard Ave., Junior Engineer	175.00
G. A. Ripley, 6328 S. Ashland Ave., Head Filter Attendant	110.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	125.00
Edward Posthuma, 10440 Wentworth Ave., Sub Instrument Man	115.00
John H. Burke, 1206 Webster Ave., Filter Atendant	110.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Asst	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A.	100.00

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	250.00
Arthur A. Bleau, 3141 Princeton Ave., Draftsman	125.00
Total	$ 2,925.00

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	$ 375.00
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. L. Barker, 550 E. 50th Pl., Resident Engineer	200.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Junior Engineer	200.00
Robert E. Harmon, 4321 N. Lowell Ave., Junior Engineer	175.00
Norman Newlands, 4902 N. Albany Ave., Junior Engineer	175.00
N. R. Herlihy, 2743 N. Albany Ave., Instrument Man	150.00
Wm. J. Quinlan, 6350 Winthrop Ave., Instrument Man	150.00
Stanley Wiza, 2639 S. 49th Ave., Rodman	100.00
Chas. McMorrow, 6857 Wabash Ave., Rodman	100.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
John Kolar, 2231 W. 19th St., Computer	120.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Inspector	115.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Inspector	115.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00

Herman B. Klahre, 212 E. Ohio St., Rodman	115.00
Wm. Kamberg, 5044 Marshfield Ave., Inspector	115.00
Henry Altman, 7000 Laflin St., Rodman	115.00
Robert Gilmartin, 3302 So. Seeley Ave., Rodman	115.00
James Ryan, 3729 Emerald Ave., Rodman	115.00
John Richards, 2641 Princeton Ave., Rodman	115.00
Thomas Doyle, 3527 Lowe Ave., Rodman	115.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00
George T. Giles, 4862 Winthrop Ave., Filter Attendant	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Wm. J. Bonn, 1343 Garfield Blvd., sub. inst. man	130.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Milton J. Kman, 5214 Lowe Ave., Rodman	100.00
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Richard Boegelsack, 10522 Ave. M, Rodman	100.00
John Witt, 2057 21st Pl., Rodman	100.00
Walter Gierszeski, 1409 W. Superior St., Rodman	115.00
J. J. Savage, 407 So. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	100.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	100.00
Total	$ 5,116.00

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Walter H. Faget, 3565 W. Van Buren St., Junior Engineer	175.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Junior Engineer	175.00
Fred W. Bethig, 11736 S. State St., Inspector	125.00
George F. Fitzgerald, 189 Walnut St., Blue Island, Sub Instrumentman	130.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., inspector, delayed time	272.66
Maurice J. Powers, 3621 Union Ave., Rodman, delayed time	272.66
Edward E. Bochmann, 473 York Pl., Blue Island, Rodman	115.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
Thos. A. Haven, 3408 S. Oakley Ave., Rodman	100.00
Total	$ 1,961.32

Sag Channel Construction Division.

John D. Hurley, 7437 W. 62nd Pl., Ass't Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Rodman	130.00
Richard F. Kelly, 3119 W. 42nd Pl., Sub Instrumentman	130.00
Arthur J. Youngberg, 1408 Melrose St., Rodman	115.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Flagman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
J. P. Sullivan, 944 W. 55th St., Rodman	115.00
J. T. Rowe, 4034 Palmer St., Rodman	115.00
Total	$ 1,271.00

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, No. Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer	150.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
John J. Alguire, 3918 Lake Park Ave., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Daniel Gleason, 848 Rush St., Engineer and Machinist	150.00
John McGlynn, 3232 Wallace St., Machinist	150.00
Max Nork, 4428 So. Albany Ave., Machinist	150.00
William Lally, 605 W. 31st St., Craneman	120.00
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
M. F. Schoff, 508 S. 9th Ave., Maywood, Engineer	150.00
Con Blocker, 10617 La Salle St., Laborer	96.00
Chas. Kevil, 4960 Park Ave., Clerk	125.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
F. A. Wagner, 120 W. 113th Pl., Oiler	110.00
M. F. Walsh, 3116 Union Ave., Oiler	110.00
John P. Doyle, 600 W. 31st St., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
George Carey, 3310 Union Ave., Engineer	150.00
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Alec Johnstone, 416 W. 79th Pl., Fireman	110.00
Michael Cronin, 7727 Blackstone Ave., Fireman	110.00
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank Dushek, 3232 Wallace St., Oiler	110.00
Michael Gleason, 3337 Parnell Ave., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler,	110.00
Samuel Vanderweil, 10934 Michigan Ave., Laborer	96.00
Arthur LaBeau, 4952 Marshfield Ave., Laborer	96.00
Joseph Runella, 455 W. 25th Pl., Laborer	96.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
Frank McGovern, 549 W. 32nd St., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 319 W. 25th Pl., Laborer	96.00
James Melville, 2908 Fifth Ave., Laborer	96.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter Helper	169.00
Patrick Holland, 4156 Wells St., Steam Fitter	169.00
Bruno Salarano, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer, 26 days	83.20
Jos. Dinovo, 624 W. 25th Pl., Laborer	96.00
Tony Bagnolia, 216 W. 24th Pl., Laborer	96.00
Henry Lyons, 2948 Bonfield St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
J. Lucy, 2808 Emerald Ave., Oiler	110.00
E. Ryan, 2715 Emerald Ave., Oiler	110.00
Total	$ 5,819.20

LAWRENCE AVENUE PUMPING STATION.

George T. Galavan, 2349 Altgeld St., Engineer in Charge	$ 200.00
Thos. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 2144 Warner Ave., Oiler	110.00
Dan O'Hern, 3603 Lowe Ave., Oiler, 20 days	73.33
James Cullen, 3535 S. Hamilton Ave., Oiler	110.00
George O'Leary, 5705 Union Ave., Oiler	110.00
Patrick Coyle, 4700 West End Ave., Fireman	110.00
Albert C. Selle, 429 N. Sawyer Ave., Oiler	110.00

James O'Leary, 3449 N. Troy St., Fireman	110.00
Ladislov Sekvenc, 2527 Kedzie Ave., Oiler	117.10
Peter Keniry, 459 W. 38th St., Fireman, 20 days	73.33
Adam Klein, 2745 Ward St., Fireman	110.00
George Stumpf, 2049 Bingham St., Engineer	150.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave	110.00
T. J. Reaney, 3838 Park Ave., Janitor	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
W. Shillerberg, 743 Weed St., Laborer, 22 days	70.40
Thos. Brannigan, 732 W. Madison St., Laborer	96.00
John A. Miller, 2543 N. Racine Ave., Engineer	150.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter	169.00
Bronislaw Wosny, 2332 N. Maplewood Ave., Oiler	110.00
Total	$ 2,737.16

LOCK, DAM AND BRIDGE TENDERS.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
Charles J. Case, 3247 W. Division St., Asst. Dam Tender	100.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, 7140 Emerald Ave., Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
Andrew Ryder, Lockport, Ill., Relief Bridge Tender, 1 day	3.33
Total	$ 943.33

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
A. F. Napieralski, 2013 S. Jefferson St., Ledger Clerk	125.00
F. F. Anderson, 3719 W. Ohio St., Ledger Clerk	125.00
George J. O'Connell, 2952 Indiana Ave., Bookkeeper	125.00
Marie Reardon, 7002 Laflin St., Record Clerk	140.00
May Broderick, 4208 Adams St., Stenographer	110.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., Clerk	125.00
Frank A. Stadler, 2906 Lincoln Ave., Clerk	125.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	135.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
John L. Fitzsimons, 5301 Union Ave., Clerk	125.00
Frank F. Hoffman, 2618 Normal Ave., Stenographer	125.00
Clarence F. Reich, 2703 N. Ashland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3022 Osgood St., Clerk	143.75
R. T. Spoerer, 6141 Morgan St., Clerk	125.00
Frank J. Martin, 1141 N. Lockwood St	125.00
William Phelan, 6141 Morgan St., Clerk	75.00
Leo J. Feeney, 8942 S. Laflin St., Office Boy	60.00
Jas. A. Daly, 3633 S. Hamilton Ave., Clerk	125.00

Storeroom.

Thos. F. Lamb, 2713 Crowell St., Storekeeper	150.00
Wm. Smith, 528 N. Homan Ave., Asst. Storekeeper	125.00
John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 4502 Emerald Ave., Warehouseman	100.00
Michael Bell, 7929 So. Morgan St., Warehouseman	100.00
Wm. Barrett, 3131 Princeton Ave., Watchman	96.00
John J. Hartnett, 6506 Marshfield Ave., Watchman	96.00
J. P. Lynch, 2842 Union Ave., Yard Foreman	150.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
Jas. A. Byrnes, 2137 Warren Ave., Inspector	175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Thomas Kelly, 220 W. 106th Pl., Inspector	175.00
Fred Meyer, 3510 Broadway, Draftsman	150.00
P. J. Burke, 2001 Indiana Ave., Plumber	133.25
B. H. Young, 4209 Indiana Ave., Carpenter	134.40
C. R. Lyons, 3036 Shields Ave., Carpenter	128.00
Patrick Conway, 2912 Bonfield Ave., Laborer	49.50
J. C. Kraiss, 3327 S. Hamilton Ave., Painter	123.00

Engineering Division.

J. F. Maddox, 4442 Magnolia Ave., Draftsman	150.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00

Testing Division.

F. A. DeMuth, 4247 W. 21st St., Testing Engineer	200.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	150.00
R. C. Pedrick, 2418 W. 36th St., Electrician	135.00
C. M. Pressmall, 330 N. Laflin St., Electrician, 15 days	67.50
H. Hullinger, 1222 W. 31st St., Electrician Helper	110.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	110.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	200.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	150.00
George Enright, 1439 W. Marquette Road, Meter Inspector	125.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	100.00
S. Murphy, 1534 Edgemont Ave., Meter Reader	100.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	125.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	125.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector	100.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	275.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	225.00
Samuel E. Cook, 11321 Forest Ave., Payroll and Record Clerk	125.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanston, Stenographer and Clerk	125.00
Jas. A. Haggerty, 3532 Van Buren St., Draftsman	125.00
Isabel Ward, 6548 Glenwood Ave., Telephone Operator, 17 days	48.17
Rita Burke, 5834 Indiana Ave., Temporary Operator, 10 days	28.33
Belle Steiger, 1141 W. 63rd St., Temporary Operator, 1 day	2.83
Lillie Howe, 559 W. 37th St., Temporary Operator, 3 days	8.50
L. A. Jones, 3538 Vernon Ave., Relief Operator	110.00
J. T. Layton, 6511 S Artesian Ave., Relief Operator	130.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	130.00
Chas. Busch, 56 E. 100th St., Messenger	85.00
M. K. Badke, 2950 Keeley St., Utility Man	100.00
Albert Stange, 504 Ferdinand St., Temporary Operator	110.00

Max Ebler, 2226 Wabash Ave., Relief Operator	110.00
W. D. Cotter, 6125 Justine St., Temporary Operator, 15 days	55.00
J. Mildenberg, 3744 N. Spaulding Ave., Relief Operator	110.00

Overhead Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	210.00
J. Sharp, 2324 W. Madison St., Foreman	210.00
J. Lamping, 3016 Congress St., Foreman	175.00
C. C. Wilson, 3214 N. Whipple St., Foreman	175.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	175.00
I. L. Damrow, 6417 S. Campbell Ave., Temporary Foreman	165.00
C. O'Leary, 646 W. 47th Pl., Lineman	150.00
Edward Lee, 6343 Carpenter St., Lineman	150.00
W. F. Jones, 3306 Irving Ave., Lineman	150.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	150.00
James Britton, 3039 Pitney Court, Lineman	150.00
A. Jorgenson, 2153 Keystone Ave., Lineman	150.00
H. Inglebright, 1039 Barry Ave., Lineman, 9 days	45.00
Owen McLane, 6053 S. Halsted St., Acting Foreman Lineman	150.00
J. R. Weston, 4709 Harrison St., Lineman	150.00
P. B. Simonton, 218 So. Western Ave., Lineman	150.00
Dennis Nolan, 448 Root St., Groundman	100.00
Thomas Woods, 1244 Washington Blvd., Groundman	100.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer	198.63
E. Pearson, 1020 Roscoe St., Cable Splicer	191.63
J. J. Elliott, 1364 E. 61st St., Cable Splicer	231.00
H. J. Berninger, 414 S. Lincoln St., Cable Splicer	145.63
W. Brunsworth, 2921 W. 40th St., Cable Splicer	156.25
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer	145.63
T. O'Leary, 316 Aberdeen St., Laborer	136.80
Thos. Healy, 4519 Washington Blvd., Cable Splicer	178.50
A. J. Peck, 5010 Calumet Ave., Cable Splicer	196.88
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper	148.13
Pat. Ryan, 3719 Colorado Ave, Cable Splicer Helper	127.50

Inside Maintenance and Construction Division.

Paul Matt, 2510 Leland Ave., Repairman	140.00
Henry Haag, 2633 Monroe, Repairman	140.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	175.00
R. T. Kelley, 2921 Lowe Ave., Operator	115.00
John Weber, 2622 Fullerton Ave., Operator	115.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	115.00
Jos. Horejs, 2743 Clifton Park Ave., Asst. Repairman	115.00

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	225.00
R. G. Close, 513 E. 11th St., Lockport, Operator	165.00
B. F. Konapack, 804 Jasper Ave., Joliet, Operator	150.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	150.00
Geo. Simmons, Lockport, Ill., Asst. Operator	130.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	150.00
V. A. Partz, 300 Sherman St., Joliet, Asst. Operator, 12 days	51.99
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	130.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	130.00
Robert Curry, 110 Katalpa St., Joliet, Oiler	125.00

J. Povalish, Lockport, Ill., Oiler	125.00
A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist	125.00
P. J. McNamara, Lockport, Ill., Watchman	96.00
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	112.50
M. C. Rich, Lockport, Ill., Maintenance Man	125.00
Frank Westerberg, 103 Iowa St., Joliet, Ill., Machinist	125.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Joliet, Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Laborer	162.60
G. Johnson, Lockport, Ill., Laborer	133.00
P. Roach, Lockport, Ill., Laborer	118.50
J. Boza, Lemont, Ill., Laborer	112.75
M. Powalish, Lemont, Ill., Laborer	121.25
C. Barr, Lockport, Ill., Laborer	130.75
R. Leidig, Lockport, Ill., Laborer	119.25
D. Faletti, Joliet, Ill., Laborer	110.50
A. Rodighiero, Lockport, Ill., Laborer	111.50
E. Erickson, 17th and Hamilton, Lockport, Laborer	67.00
P. Lyons, E. 17th St., Lockport, Laborer	136.00
Al. Johnson, 18th and Jefferson, Lockport, Laborer	131.50

Terminal.

J. F. Vedder, 6834 Yale Ave., Dispatcher	165.00
W. J. Kloss, 3220 N. Sacramento Ave., Load Dispatcher	165.00
M. T. Coughlin, 434 E. 46th St., Load Dispatcher	165.00
J. S. Black, 6155 S. Laflin St., Load Dispatcher (Relief)	165.00
Edw. Held, 3429 Parker Ave., Switchboard Operator	140.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	140.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	130.00
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	130.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	140.00

Blue Island.

Harriet Stephens, 65 New St., Blue Island, Clerk	55.00
Wm. H. Greene, 639 York St., Blue Island, Operator	110.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	110.00
Chas. Weber, 230 Walnut St., Operator	110.00
Charles Carlson, Lockport, Ill., Laborer	96.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	110.00
S. J. Cannon, 1309 Emerson St., Locktender and Janitor	100.00
A. Underdown, 706 Main St., Evanston, Operator	110.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator	110.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator	110.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator	165.00
Knute Anderson, 6324 Wentworth Ave., Operator	130.00
Frank C. Lambert, 5526 So. Lincoln St., Operator	130.00
E. P. Spriegel, 2451 Station St., Operator	130.00

Ashland Avenue.

W. J. Moylan, 2933 Shields Ave., Operator, 15 days	55.00
W. D. Cotter, 6125 Justine St., Operator, 15 days	55.00
C. J. Ward, 3001 S. Canal St., Operator	110.00
H. E. Reilly, 4445 Wallace St., Operator	110.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator	110.00
E. Martin, 1925 Otto St., Temporary Operator	110.00
Frank Davidson, 932 Rush St., Operator	110.00

West Twelfth Street.

W. E. Nancarrow, 4648 Warwick Ave., Operator	110.00
P. J. English, 3416 S. Marshfield Ave., Operator	110.00
E. P. DeBarr, 825 George St., Operator	110.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator	110.00
R. Hardell, 3142 N. Robey St., Engineer	140.00
P. Kacyerzewski, 2354 Elston Ave., Operator	110.00

Forest Park.

S. H. Reed, 2742 N. Crawford Ave., Operator	110.00
R. W. C. Newmann, 7416 Washington St., Operator	110.00
Thos. Podraza, 1363 W. Chicago Ave., Operator	110.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Engineer	20.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Engineer	10.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Engineer	10.00

Utility Equipment Division.

Chas. H. Kent, 3124 Lowe Ave., Superintendent	175.00
B. H. Stuber, 3029 Union Ave., Machinist	135.00
Chas. F. Larson, 6718 St. Lawrence Ave., Machinist	130.00
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4407 Normal Ave., Washer, 15 days	48.00
James T. Patton, 1146 Jackson Blvd., Washer, 16 days	51.20
Geo. B. Kelly, 834 N. Springfield Ave., Captain, Robert R.	125.00
Sidney Smith, 1221 W. Randolph St., Washer, 12 days	38.40
Thos. J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R.	125.00
Geo. H. Gardner, 1732 Clifton Park Ave., Engineer, Robert R.	125.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A.	100.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur	110.00
John Dean, 607 Belden Ave., Chauffeur	110.00
J. Neckerman, 4411 Federal St., Chauffeur	110.00
John Creen, 3002 Emerald Ave., Chauffeur	110.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R.	100.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	110.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	110.00

Temporary Roll—Architectural Division.

E. C. Geduldig, 3259 Lowe Ave	123.00
John F. Chopski, 921 W. 31st St., Bricklayer	161.40
P. Connors, 10603 La Fayette Ave., Fireman	100.00
Theo. Frantz, 5344 S. Winchester Ave., Laborer	100.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Acting Foreman	175.00
A. R. Verschave, 7836 S. Carpenter St., Lineman	150.00
Wm. G. Zepp, 5749 Drexel Ave., Lineman	150.00
Frank Hobbs, 2704 Warren Ave., Lineman	150.00
G. J. Cushing, 210 S. Whipple St., Groundman	150.00
Thos. Lane, 5740 S. Lincoln Ave., Lineman	100.00
Frank Guibard, 5731 Aberdeen St., Lineman	150.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	150.00
John J. Dassie, 3616 W. 83rd St., Lineman	150.00

J. M. Kelly, 6147 Newberry Ave., Lineman	150.00
D. McAvoy, 3317 W. Madison St., Lineman	150.00
Jos. Allard, 3117 Normal Ave., Chauffeur	110.00
W. Glass, 3738 Madison St., Lineman	150.00
M. Hogan, 1507 W. 72nd Pl., Groundman	100.00
Joy McConkey, 2903 Warren Ave., Lineman, 5 days	25.00
F. S. Allen, 4026 Washington Blvd., Lineman	150.00
Thos. J. Falls, 5561 Shields Ave., Lineman	150.00
Jas. F. Barry, 218 S. Western Ave., Lineman	150.00
T. A. Singer, 3718 Grand Ave., Lineman	150.00
Geo. Mitchell, 3159 Emerald Ave., Lineman	100.00
Peter Hart, 348 W. 30th St., Lineman	100.00
Nicholas Martin, 350 W. 30th Pl., Lineman, 19 days	63.33
P. L. Englert, 3038 Wallace St., Lineman	100.00
Thos. Cunningham, 937 W. 35th Pl., Lineman, 4 days	13.33

Temporary Inside Maintenance and Construction Division.

Thos. Sheehan, 2476 Albany Ave., Repairman	140.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	140.00
H. J. O'Connell, 6157 Michigan Ave., Asst. Repairman	115.00
Total	$ 31,346.03
Grand Total	$ 86,956.96

Payroll of The Sanitary District of Chicago for the Month of December, 1918.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakwood Ave., President of Board	$ 625.00
Fred D. Breit, 5700 Washington Blvd., Trustee, 3 days	40.32
James M. Dailey, 549 W. 31st St., Trustee, 3 days	40.32
Charles E. Reading, 11520 S. Michigan Ave., Trustee, 3 days	40.32
Wallace G Clark, 30 N. Michigan Ave., Trustee	416.67
George W. Paullin, 30 N. Michigan Ave., Trustee	416.67
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.67
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.67
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.67
Wm. J. Healy, 716 W. Madison St., Trustee, 27 days	376.34
Harry E. Littler, 2505 N. Washtenaw Ave., Trustee, 27 days	376.34
Willis O. Nance, 30 N. Michigan Ave., Trustee, 27 days	376.34
Wm. B. Foley, 819 Independence Blvd., Secretary to President	250.00
Total	$ 4,208.36

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7950 Harvard Ave., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 S. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	120.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	130.00

Accounting and Record Division

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Record Clerk	160.00
G. A. Kelly, 436 Homan Ave., Budget Bookkeeper	150.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Jas. T. Graham, 3115 S. Union Ave., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Louise L. Levy, 4817 Prairie Ave., Stenographer	100.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier	125.00
Total	$ 4,361.67

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Edward Keeley, 2816 N. Francisco Ave., Manager	$ 300.00
Frances Rodney, 537 E. 34th St., Secretary	135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 560.00

DEPARTMENT OF LAW.

Edmund D. Adcock, 4800 Dorchester Ave., Attorney	$ 916.66
Ross C. Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 409 Oakland Crescent, Illinois Valley Attorney	441.67
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst. Attorney	500.00
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
George F. Mulligan, 228 S. Mayfield Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	225.00
George H. Hough, 500 Diversey Parkway, Asst. Attorney	250.00
A. A. Bach, 6005 S. La Salle St., Law Clerk, 28 days	183.87
Matilda M. Lynn, 5343 Kenmore Ave., Voucher Clerk and Bookkeeper	125.00
John J. Gaynor, 5215 Washington Blvd., Investigator	175.00
James A. Kearns, 21 W. Garfield Blvd., Law Clerk	200.00
Patrick J. Sheehan, 818 N. Clark St., Investigator	125.00
Irene Mueller, 5017 S. Wood St., Stenographer	110.00
Miriam Ehrlich, 3129 Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	17500
Graham B. Trainer, 5202 Cornell Ave., Messenger, 13 days	35.65
Total	$ 7,181.17

DEPARTMENT OF POLICE.

John F. O'Neill, 7927 S. Morgan St., Marshal	$ 250.00
Joseph Kennefick, 3907 Emerald Ave., Sergeant	125.00
James Haggerty, 3201 Princeton Ave., Sergeant	125.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	125.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	115.00
Daniel D. Curtin, 3313 W. Madison St., Patrolman	115.00
Sylvester O'Brien, 7318 Langley Ave., Patrolman	115.00
Michael Plunkett, 100 S. Sangamon St., Patrolman	115.00
Joseph F. Ring, 1210 N. Halsted St., Patrolman	115.00
James B. Walsh, 65 E. 42nd St., Ptrolman	115.00
Emil Klank, 3616 S. Western Ave., Patrolman	115.00
Matthew Tychsen, 812 Massasoit Ave., Patrolman	115.00
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	115.00
Edward Morrissey, 157 N. Sheldon St., Patrolman	115.00
Tony Alessi, 2547 Wallace St., Patrolman	115.00
Anton J. Stasch, 2938 N. Springfield Ave., Patrolman	115.00
Frank Uczciwek, 1226 Cleaver St., Patrolman	115.00
Anthony Intrieri, 914 W. Polk St., Patrolman	115.00
Wm. Moran, 6229 S. Lincoln St, Patrolman	115.00
John J. Burke, 1252 S. Keeler Ave., Patrolman	115.00
John Conlon, 360 Wendel St., Patrolman	115.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	115.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	115.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	115.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	115.00
R. J. Dooley, 2146 W. 21st Pl., Patrolman	115.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	115.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	115.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	115.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	115.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	115.00
John E. Pierce, 4080 S. Wells St., Patrolman	115.00
Frank Timoney, 732 N. Leavitt St., Patrolman	115.00

James Mooney, 3450 Walnut St., Patrolman	115.00
Herman Tabbert, 1723 Hastings St., Patrolman	115.00
Henry D. Lynch, 5635 S. Wood St., Patrolman	100.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	115.00
Charles A. Ison, 5926 S. Wood St., Patrolman	115.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	115.00
Denis McCaffrey, 3919 Jackson Blvd., Patrolman	115.00
Patrick H. Leahy, 2744 Wentworth Ave., Patrolman	115.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	115.00
Frank Kouba, 656 W. 18th St., Patrolman	115.00

Temporary Employes.

John J. Gleason, 3026 Emerald Ave., Patrolman	115.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	115.00
A. J. McVady, 6432 Drexel Ave., Patrolman	115.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
Peter J. Trenz, 1931 Cuyler Ave., Patrolman	115.00
Geo. E. Paul, 4309 N. Ridgeway Ave., Patrolman	115.00
Louis Lorentzen, 3637 N. Sawyer Ave., Patrolman	115.00
George A. Keller, 2820 Warren Ave., Patrolman	115.00
J. T. Johnson, Lemont, Ill., Patrolman	115.00
Barney Klecka, 1853 S. Western Ave., Patrolman	115.00
Chas. R. Fross, 801 E. 41st St., Patrolman	100.00
Michael Conway, 1944 N. Lincoln St., Patrolman	100.00
G. Havill, 5634½ Maryland Ave., Patrolman	100.00
Total	$ 6,775.00

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 500.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	250.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	175.00
O. W. Boers, Chillicothe, Ill., Draftsman	175.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	145.00
W. T. McManna, 2922 Parnell Ave., Draftsman	120.00
L. H. Welcome, 553 W. 35th St., Computor	115.00
John Markham, 1243 Foster Ave., Chicago, Ill., Rodman	100.00
Total	$ 1,580.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 6.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	5.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	6.00
Joseph Limacher, Minooka, Ill., Gauge Reader	5.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
William Camegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
Sam G. Belt, 106 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	10.00
John Brookman, Seneca, Ill., Gauge Reader	5.00
George A. Campbell, Marseilles, Ill., Gauge Reader	5.00
Noah Morial, Marseilles, Ill., Gauge Reader	5.00
James McGrogan, Dayton, Ill., Gauge Reader	6.00
C. H. Barnard, C. B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	10.00
George Keeley, Wilmington, Ill., Gauge Reader	5.00
John F. Alt, County Asylum, Ottawa, Ill., Gauge Reader	5.00
Bernard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	6.00
Peter DeGroot, Peru, Ill., Water Sampler and Gauge Reader	10.00
Henry Harbeck, Utica, Ill., Gauge Reader	5.00
David Gleason, DePue, Ill., Gauge Reader	5.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	5.00

Philip Riley, Lacon, Ill., Gauge Reader	5.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	5.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	5.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	5.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	5.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	5.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	5.00
William LeTissier, Bath, Ill., Gauge Reader	5.00
W. L. Waters, Browning, Ill., Gauge Reader	5.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	5.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	5.00
Total	$ 169.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	375.00
Philip Harrington, 117 N. Kildare Ave., Division Engineer	375.00
E. L. Cooley, 136 Indiana Ave., Asst. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Junior Engineer	175.00
J. T. Soderstam, 1211 Newport Ave., Draftsman, 28½ days	163.71
Fred W. Kirk, 68 E. 56th St., Draftsman	160.00
M. P. Williams, 2749 Washington Blvd., Draftsman	160.00
R. G. Galke, 1834 Eddy St., Draftsman	160.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
L. W. A. Bunge, 418 N. Taylor Ave., Oak Park, Asst. Mech. Eng	150.00
Rudolph Christoph, 2139 Melrose St., Superintendent	150.00
Nellie McArdle, 8019 Green St., Stenographer	110.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	125.00
Clarence E. Wilson, 2817 N. Clark St., Rodman	115.00
Edwin C. Crowe, 2318 N. Kenneth Ave., Tracer	85.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	275.00
Ingolf Erdal, 1504 S. 4th Ave., Maywood, Bridge Computer	200.00
Edwin A. Howes, 5340 Windsor Ave., Bridge Computer	200.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Computer	200.00
Richard DeYoung, 10226 State St., Bridge Draftsman	190.00
E. F. Doud, 418 E. 64th St., Instrument Man	150.00
Stanley A. Jankowski, 3222 Wall St., Sub Instrument Man	130.00
F. E. Helmick, 6030 Union Ave., Sub Instrument Man	130.00

Record Division.

Theodore Buskirk, 3903 Ellis St., Resident Engineer	175.00
W. T. Lynch, 5643 Wayne Ave., Record Clerk	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	160.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Computer	130.00
Otto Gnewuch, 2303 S. Dearborn St., Computor, 15 days	60.00
Fred H. Busse, 5818 N. Talman Ave., Computer	120.00
E. Edinger, 3259 Indiana Ave., Clerk	115.00
Edna Burke, 11349 Indian Ave., Stenographer	110.00
John F. Harper, 311 E. 45th St., Stenographer	110.00
Geo. Neupert, 75 W. Jackson Blvd., Inspector	120.00

Hydraulic Measurements Division.

John D. O'Donnell, 1048 W. 15th St., Rodman	115.00
Total	$ 8,325.37

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
John A. Kozinski, 8636 Exchange Ave., Instrument Man	150.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Wm. J. Jaeger, 3028 Emerald Ave., Sub Instrument Man	130.00
John Murphy, 3740 Emerald Ave., Rodman	115.00
Joseph J. Kelly, 3155 Union Ave., Rodman	115.00
Wm. C. Snyder, 2245 N. Keeler Ave., Inspector	115.00
Frank Palermo, 7037 S. Hermitage Ave., Launch Engineer	115.00
Total	$ 1,353.33

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 500.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer	225.00
L. C. Whittemore, 1216 E. 54th St., Asst. Sanitary Engineer	250.00
Herbert Swanson, 903 N. Central Ave., Asst. Chemist	115.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Junior Engineer	175.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
Walter M. DeBerard, 1418 Howard Ave., Junior Engineer	175.00
G. A. Ripley, 6328 S. Ashland Ave., Head Filter Attendant	110.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	125.00
Edward Posthuma, 10440 Wentworth Ave., Sub Instrument Man	115.00
John H. Burke, 1206 Webster Ave., Filter Attendant	110.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Assistant	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A.	100.00

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	250.00
Arthur A. Bleau, 3141 Princeton Ave., Draftsman	125.00
Total	$ 2,925.00

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	$ 375.00
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. B. Barker, 550 E. 50th Pl., Resident Engineer	200.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Junior Engineer	200.00
Robert E. Harmon, 4321 N. Lowell Ave., Junior Engineer	175.00
Norman Newlands, 4902 N. Albany Ave., Junior Engineer	175.00
N. R. Herlihy, 2743 N. Albany Ave., Instrument Man	150.00
Wm. J. Quinlan, 6350 Winthrop Ave., Instrument Man	150.00
Stanley Wiza, 2639 S. 49th Ave., Rodman	100.00
Chas. McMorrow, 6857 Wabash Ave., Rodman	100.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
John Kolar, 2231 W. 19th St., Computer	120.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Inspector	115.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Inspector	115.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 E. Ohio St., Rodman	115.00
Wm. Kamberg, 5044 Marshfield Ave., Inspector	115.00
Henry Altman, 7000 Laflin St., Rodman	115.00
Robert Gilmartin, 3302 S. Seeley Ave., Rodman	115.00
James Ryan, 3729 Emerald Ave., Rodman	115.00
John Richards, 2641 Princeton Ave., Rodman	115.00
Thomas Doyle, 3527 Lowe Ave., Rodman	115.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00

A. R. Runston, 11135 Edbrook Ave., Watchman, 18 days	68.63
George T. Giles, 4862 Winthrop Ave., Filter Attendant	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Wm. J. Bonn, 1343 Garfield Blvd., Rodman	130.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Milton J. Kman, 5214 Lowe Ave., Rodman	107.50
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Richard Boegelsack, 10522 Avenue M, Rodman	100.00
John Witt, 2057 21st Pl., Rodman	100.00
Walter Gierszeski, 1409 W. Superior St., Rodman	115.00
J. J. Savage, 407 S. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	107.50
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	100.00
Total	$ 5,131.00

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Walter H. Faget, 3565 W. Van Buren St., Junior Engineer	175.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Junior Engineer	175.00
Fred W. Bethig, 11736 S. State St., Inspector	125.00
George F. Fitzgerald, 189 Walnut St., Blue Island, Sub Instrumentman	130.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector	115.00
Maurice J. Powers, 3621 Union Ave., Rodman	115.00
Edward E. Bochmann, 473 York Pl., Blue Island, Rodman	115.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
Total	$ 1,531.00

Sag Channel Construction Division.

John D. Hurley, 7437 W. 62nd Pl., Asst. Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Rodman	130.00
Richard F. Kelly, 3119 W. 42nd Pl., Sub Instrumentman	130.00
Arthur J. Youngberg , 1408 Melrose St., Rodman	115.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Flagman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
J. P. Sullivan, 944 W. 55th St., Rodman	115.00
J. T. Rowe, 4034 Palmer St., Rodman, 15 days	57.50
Total	$ 1,213.50

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, North Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer	150.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
John J. Alguire, 3918 Lake Park Ave., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Daniel Gleason, 848 Rush St., Engineer and Machinist	150.00
Max Nork, 4428 S. Albany Ave., Machinist	150.00

William Lally, 605 W. 31st St., Craneman	120.00
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Chas. Kevil, 4960 Park Ave., Clerk	125.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
F. A. Wagner, 120 W. 113th Pl., Oiler	110.00
M. F. Walsh, 3116 Union Ave, Oiler	110.00
John P. Doyle, 600 W. 31st St., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
George Carey, 3310 Union Ave., Engineer	150.00
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Alec Johnstone, 416 W. 79th Pl., Fireman	110.00
Michael Cronin, 7727 Blackstone Ave., Fireman	110.00
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank Dushek, 3232 Wallace St., Oiler	110.00
Michael Gleason, 3337 Parnell Ave., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler	110.00
Samuel Vanderweil, 10934 Michigan Ave., Laborer	96.00
Arthur LaBeau, 4952 Marshfield Ave., Laborer	96.00
Joseph Runella, 455 W. 25th Pl., Laborer	96.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
Frank McGovern, 549 W. 32nd St., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 319 W. 25th Pl., Laborer	96.00
James Melville, 2908 Fifth Ave., Laborer, 15 days	48.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter Helper	169.00
Patrick Holland, 4156 Wells St., Steam Fitter	169.00
Bruno Salarno, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer	96.00
Jos. Dinovo, 624 W. 25th Pl., Laborer	96.00
Tony Bagnolia, 216 W. 24th Pl., Laborer, 15 days	48.00
Henry Lyons, 2948 Bonfield St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
J. Lucy, 2808 Emerald Ave., Oiler	110.00
E. Ryan, 2715 Emerald Ave., Oiler	110.00
M. F. Schopf, 508 S. 9th Ave., Maywood, Engineer	150.00
Con Blocker, 10617 La Salle St., Laborer	96.00
Total	$ 5,661.00

LAWRENCE AVENUE PUMPING STATION.

George T. Galavan, 2349 Altgeld St., Engineer in Charge	$ 200.00
Tho. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 1941 Warner Ave., Oiler	110.00
Dan O'Hern, 3603 Lowe Ave., Oiler	110.00
James Cullen, 3535 S. Hamilton Ave., Oiler	110.00
George O'Leary, 5705 Union Ave., Oiler	110.00
Patrick Coyle, 4700 West End Ave., Fireman	110.00
Albert C. Selle, 429 N. Sawyer Ave., Oiler	110.00
James O'Leary, 3449 N. Troy St., Fireman	110.00
Ladislov Sekvenc, 2527 Kedzie Ave., Oiler	110.00
Peter Keniry, 459 W. 38th St., Fireman	110.00
Adam Klein, 2745 Ward St., Fireman	110.00
George Stumpf, 2049 Bingham St., Engineer	150.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave	110.00
T. J. Reaney, 3838 Park Ave., Janitor	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
Thos. Brannigan, 732 W. Madison St., Laborer	96.00

John A. Miller, 2543 N. Racine Ace., Engineer	150.00
Patrick Grady, 835 W. 54th Pl., Laborer, 29½ days	92.90
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter	169.00
Bronislaw Wosny, 2332 N. Maplewood Ave., Oiler, 23 days	81.61
Total	$ 2,797.51

LOCK, DAM AND BRIDGE TENDER.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
Charles J. Case, 3247 W. Division St., Asst. Dam Tender	100.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, 7140 Emerald Ave., Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
Total	$ 940.00

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
A. F. Napieralski, 2013 S. Jefferson St., Ledger Clerk, 9 days	36.29
F. F. Anderson, 3719 W. Ohio St., Ledger Clerk	125.00
James A. Daly, 3633 S. Hamilton Ave., Clerk	125.00
Marie Reardon, 7002 Laflin St., Record Clerk	140.00
May Broderick, 4208 Adams St., Stenographer	110.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., Clerk	125.00
Frank A. Stadler, 2906 Lincoln Ave., Clerk	125.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	135.00
Samuel R. Cohen, 4517 Calumet Ave., Clerk	125.00
John L. Fitzsimons, 5301 Union Ave., Clerk	125.00
Frank F. Hoffman, 2618 Normal Ave., Stenographer	125.00
Clarence F. Reich, 2703 N Ahland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3022 Ogood St., Clerk	125.00
R. T. Spoerer, 6141 Morgan St., Clerk, 7 days	28.22
Frank J. Martin, 1141 N. Lockwood St	125.00
William Phelan, 6141 Morgan St., Clerk, 29 days	75.00
Leo J. Feeney, 8942 S. Laflin St., Office Boy	60.00

Storeroom.

Thos. F. Lamb, 2713 Crowell St., Storekeeper	150.00
Wm. Smith, 518 N. Homan Ave., Storekeeper	125.00
John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 4502 Emerald Ave., Warehouseman	100.00
Michael Bell, 7929 S. Morgan St., Warehouseman	100.00
Wm. Barrett, 3131 Princeton Ave., Watchman	96.00
John J. Hartnett, 6506 Marshfield Ave., Watchman	96.00
J. P. Lynch, 2842 Emerald Ave., Yard Foreman	151.50

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
Jas. A. Byrnes, 2137 Warren Ave., Inspector	175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Thomas Kelly, 220 W. 106th Pl., Inspector	175.00
Fred Meyer, 3510 Broadway, Draftsman	150.00
B. H. Young, 4209 Indiana Ave., Carpenter	153.60
C. R. Lyons, 3036 Shields Ave., Carpenter	153.60
J. C. Kraiss, 3327 S. Hamilton Ave., Painter	138.00

Engineering Division.

J. F. Maddox, 4442 Magnolia Ave., Draftsman	200.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00

Testing Division.

F. A. DeMuth, 4247 W. 21st St., Testing Engineer	200.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	150.00
R. C. Pedrick, 2418 W. 36th St., Electrician	125.00
H. Hullinger, 1222 W. 31st St., Electrician Helper	110.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	110.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	200.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	150.00
George Enright, 1439 W. Marquette Road, Meter Inspector	125.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	100.00
S. Murphy, 1534 Edgemont Ave., Meter Reader	100.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	125.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	125.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector	100.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	275.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	225.00
Samuel E. Cook, 11321 Forest Ave., Payroll and Record Clerk, 5 days	20.16
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanton, Stenographer and Clerk	125.00
Jas. A. Haggerty, 3532 Van Buren St., Draftsman	125.00
Isabel Ward, 6548 Glenwood Ave., Telephone Operator	82.26
L. A. Jones, 3538 Vernon Ave., Relief Operator	110.00
J. T. Layton, 6511 S. Artesian Ave., Relief Operator	130.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	130.00
Chas. Busch, 56 E. 100th St., Messenger	85.00
M. K. Badke, 2950 Keeley St., Utility Man	100.00
Paul Matt, 2510 Leland Ave., Relief Operator	130.00
Albert Stange, 504 Ferdinand St., Temporary Operator	110.00
Max Ebler, 2226 Wabash Ave., Relief Operator	110.00
J. Mildenberg, 3744 N. Spaulding Ave., Relief Operator	110.00

Overhead Maintenance and Contruction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	210.00
J. Sharp, 2324 W. Madison St., Foreman	210.00
J. Lamping, 3016 Congress St., Foreman	175.00
C. C. Wilson, 3214 N. Whipple St., Foreman	175.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	175.00
I. L. Damrow, 6417 S. Campbell Ave., Temporary Foreman	150.00
C. O'Leary, 646 W. 47th Pl., Lineman	150.00
Edward Lee, 6343 Carpenter St., Lineman	150.00
W. F. Jones, 3306 Irving Ave., Lineman	150.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	150.00
James Britton, 3039 Pitney Court, Lineman	150.00
A. Jorgenson, 2153 Keystone Ave., Lineman	150.00

H. Inglebright, 1039 Barry Ave., Lineman, 22 days	108.87
Owen McLane, 6053 S. Halsted St., Acting Foreman Lineman	150.00
J. R. Weston, 4709 Harrison St., Lineman	150.00
P. B. Simonton, 218 S. Western Ave., Lineman	150.00
Dennis Nolan, 448 Root St., Groundman	100.00
Thomas Woods, 1244 Washington Blvd., Groundman	100.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer	203.00
E. Pearson, 1020 Roscoe St., Cable Splicer	191.63
J. J. Elliott, 1364 E. 61st St., Cable Splicer	206.50
H. J. Berninger, 414 S. Lincoln St., Cable Splicer	133.13
W. Brunsworth, 2921 W. 40th St., Cable Splicer	143.75
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer	118.13
T. O'Leary, 316 Aberdeen St, Laborer	106.20
A. J. Peck, 5010 Calumet Ave., Cable Splicer	186.38
Harry Johnon, 2845 Lyndale Ave., Cable Splicer Helper	145.00
Thos. J. Healy, 4519 Washington Blvd., Cable Splicer Helper	186.38
Patrick Ryan, 3719 Colorado Ave., Cable Splicer Helper	133.13

Inside Maintenance and Construction Division.

Henry Haag. 2633 Monroe, Repairman	140.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	175.00
R. T. Kelley, 2921 Lowe Ave., Operator	115.00
John Weber, 2537 Calvin St., Operator	115.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	115.00
Jos. Horejs, 2743 Clifton Park Ave., Asst. Repairman, 12 days	44.51

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	225.00
R. G. Close, 513 E. 11th St., Lockport. Operator	165.00
B. F. Konapack, 804 2nd Ave., Joliet, Operator	150.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	150.00
Geo. Simmons, Lockport, Ill., Asst. Operator	130.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	150.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerburg, 103 Iowa Ave., Joliet, Machinist	125.00
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	130.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	130.00
Robert Curry, 110 Katalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Oiler	125.00
A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist	125.00
P. J. McNamara, Lockport, Ill., Watchman	96.00
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	125.00
M. C. Rich, Lockport, Ill., Maintenance Man	125.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Joliet, Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Laborer	166.20
G. Johnon, Lockport, Ill., Laborer	137.50
P. Roach, Lockport, Ill., Laborer	130.50
J. Boza, Lemont, Ill., Laborer	132.50
M. Powalish, Lemont, Ill., Laborer	124.50
C. Barr, Lockport, Ill., Laborer	138.50
R. Leidig, Lockport, Ill., Laborer	114.75
D. Faletti, Joliet, Ill., Laborer	121.75
A. Rodighiero, Lockport, Ill., Laborer	138.50

P. Lyons, E. 17th St., Lockport, Laborer..... 134.50
Alf. Johnson, 18th and Jefferson, Lockport, Laborer..... 138.50
Chas. Carlson, 12th St., Lockport, Laborer..... 133.50

Terminal.

J. F. Vedder, 5834 Yale Ave., Dispatcher..... 165.00
W. J. Kloss, 3220 N. Sacramento Ave., Load Dispatcher..... 165.00
M. T. Coughlin, 434 E. 46th St., Load Dispatcher..... 165.00
J. S. Black, 6155 S. Laflin St., Load Dispatcher (Relief)..... 165.00
Edw. Held, 3429 Parker Ave., Switchboard Operator..... 140.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator..... 140.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator..... 130.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator, 15 days..... 65.00
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator..... 130.00
Henry Hilton, 5440 Winchester Ave., Janitor..... 96.00
F. Newman, 3089 Lyman St., Janitor..... 96.00
C. H. Gehrke, 327 W. 61t St., Operator..... 140.00

Blue Island.

Harriet Stephens, 65 New St., Blue Island, Clerk..... 55.00
Wm. H. Greene, 639 York St., Blue Island, Operator..... 110.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator..... 110.00
Chas. Weber, 230 Walnut St., Operator..... 110.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator..... 110.00
S. J. Cannon, 1309 Emeron St., Locktender and Janitor..... 100.00
A. Underdown, 706 Main St., Evanston, Operator..... 110.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator..... 110.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator..... 110.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator..... 165.00
Knute Anderson, 6324 Wentworth Ave., Operator..... 130.00
Frank C. Lambert, 5526 S. Lincoln St., Operator..... 130.00
E. P. Spriegel, 2451 Station St., Operator..... 130.00

Ashland Avenue.

Wm. D. Cotter, 6125 Justine St., Operator..... 110.00
C. J. Ward, 3001 S. Canal St., Operator..... 110.00
H. E. Reilly, 4445 Wallace St., Operator..... 110.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator..... 110.00
E. Martin, 1925 Otto St., Temporary Operator..... 110.00
Frank Davidson, 932 Rush St., Operator..... 110.00

West Twelfth Street.

W. E. Nancarrow, 4648 Warwick Ave., Operator..... 110.00
P. J. English, 3416 S. Marshfield Ave., Operator..... 110.00
E. P. DeBarr, 825 George St., Operator..... 110.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator..... 110.00
R. Hardell, 3142 N. Robey St., Engineer..... 140.00
P. Kacyerzewski, 2354 Elston Ave., Operator..... 110.00
P. Sexton, 3243 Polk St., Bricklayer..... 42.00
F. Johnson, 726 W. 15th St., Bricklayer's Helper..... 32.00

Forest Park.

S. H. Reed, 2742 N. Crawford Ave., Operator..... 110.00
R. W. C. Newmann, 7416 Wahington St., Operator..... 110.00
Thos. Podraza, 1363 W. Chicago Ave., Operator..... 110.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Engineer	20.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Engineer	10.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Engineer	10.00

Utility Equipment Division.

Chas. H. Kent, 3124 Lowe Avenue., Superintendent	175.00
B. H. Stuber, 3029 Union Ave., Machinist	135.00
Chas. F. Larson, 6718 St. Lawrence Ave., Machinist	125.00
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4407 Normal Ave., Washer, 20 days	73.48
Sidney Smith, 1221 W. Randolph St., Washer	96.00
James T. Patton, 1146 Jackson Blvd., Washer	96.00
Geo. B. Kelly, 834 N. Springfield Ave., Captain, Robert R	125.00
Thos. J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R	125.00
Geo. H. Gardner, 1732 Clifton Park Ave., Engineer, Robert R	125.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A	100.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur	110.00
John Dean, 607 Belden Ave., Chauffeur	110.00
J. Neckerman, 4411 Federal St., Chauffeur	110.00
John Creen, 3002 Emerald Ave., Chauffeur	110.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R	100.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	110.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	110.00

Temporary Roll—Architectural Division.

E. C. Geduldig, 3259 Lowe Ave	99.00
John F. Chopski, 921 31st St., Bricklayer	140.40
Theo. Frantz, 5344 S. Winchester Ave., Laborer	100.00
Pat Conners, 10603 Lafayette Ave., Laborer	100.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Acting Foreman	175.00
A. R. Verschave, 7836 S. Carpenter St., Lineman	150.00
Wm. G. Zepp, 5749 Drexel Ave., Lineman	150.00
Frank Hobbs, 2704 Warren Ave., Lineman	150.00
G. J. Cushing, 210 S. Whipple St., Groundman, 23 days	113.71
Thos. Lane, 5740 S. Lincoln Ave., Lineman	100.00
Frank Guibard, 5731 Aberdeen St., Lineman	150.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	150.00
John J. Dassie, 3616 W. 83rd St., Lineman	150.00
J. M. Kelly, 6147 Newberry Ave., Lineman	150.00
D. McAvoy, 3317 W. Madison St., Lineman	150.00
W. Glass, 3738 Madison St., Lineman	150.00
Michael Hogan, 1507 W. 76th Pl., Groundsman	100.00
Jos. Allard, 3117 Normal Ave., Chauffeur	110.00
F. S. Allen, 4026 Washington Blvd., Lineman	150.00
Thos. J. Falls, 5561 Shields Ave., Lineman	150.00
Jas. F. Barry, 218 S. Western Ave., Lineman	150.00
T. A. Singer, 3718 Grand Ave., Lineman	150.00
Joy McConkey, 2903 Warren Ave., Lineman	150.00
Geo. Mitchell, 3159 Emerald Ave., Lineman	100.00
Peter Hart, 348 W. 30th St., Lineman	100.00
Nicholas Martin, 350 W. 30th Pl., Lineman	126.99
P. L. Englert, 3038 Wallace St., Lineman	100.00

Temporary Inside Maintenance and Construction Division.

Thos. Sheehan, 2476 Albany Ave., Repairman	140.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	140.00
H. J. O'Connell, 6157 Michigan Ave., Asst. Repairman	115.00
Total	$ 30,861.02
Grand Total	$ 85,818.01

Payroll of The Sanitary District of Chicago for the Month of January, 1919.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakwood Ave., President of Board	$ 625.00
Wm. J. Healy, 716 W. Madison St., Trustee	416.67
Harry E. Littler, 2505 N. Washtenaw Ave., Trustee	416.67
Willis O. Nance, 30 N. Michigan Ave., Trustee	416.67
Wallace G Clark, 30 N. Michigan Ave., Trustee	416.67
George W. Paullin, 30 N. Michigan Ave., Trustee	416.67
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.67
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.67
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.67
Wm. B. Foley, 819 Independence Blvd., Secretary to President	250.00
Total	$ 4,208.36

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7950 Harvard Ave., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 S. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	120.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	.95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	130.00

Accounting and Record Division

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Record Clerk, 24½ day	129.00
G. A. Kelly, 436 Homan Ave., Budget Bookkeeper	150.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. T. Graham, 3115 S. Union Ave., Budget Clerk	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Louise L. Levy, 4817 Prairie Ave., Stenographer, 15 days	50.00
Helen Shine, 1118 W. Garfield Blvd., Stenographer, 15 days	50.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier	125.00
Total	$ 4,330.67

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Edward Keeley, 2816 N. Francisco Ave., Manager	$ 300.00
Frances Rodney, 537 E. 34th St., Secretary, 5 days	21.77
Irene Mueller, 5017 S. Wood St., Secretary-Stenographer, 25 days	111.05
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 557.82

DEPARTMENT OF LAW.

C. Arch Williams, 4536 Drexel Blvd., Attorney	833.33
Ross C Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	441.67
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst. Attorney	500.00
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	225.00
George H. Hough, 500 Diversey Pkwy., Asst. Attorney	250.00
A. A. Bach, 6005 S. La Salle St., Law Clerk	200.00
Matilda M. Lynn, 5343 Kenmore Ave., Voucher Clerk and Bookkeeper	125.00
John J. Gaynor, 5215 Washington Blvd., Investigator, 7 days	39.52
James A. Kearns, 21 W. Garfield Blvd., Law Clerk	200.00
Patrick J. Sheehan, 818 N. Clark St., Investigator	125.00
Irene Mueller, 5017 S. Wood St., Stenographer, 5 days	17.74
Miriam Ehrlich, 3129 Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	175.00
Graham B. Trainer, 5202 Cornell Ave., Messenger	85.00
George Neupert, 75 W. Jackson Blvd., Investigator, 24 days	138.31
J. Walter Nielsen, 2204 Kimball Ave., Investigator, 12 days	48.39
Francis Rodney, 537 E. 34th St., Stenographer, 25 days	90.49
Total	$ 6,687.77

DEPARTMENT OF POLICE.

John F. O'Neill, 7927 S. Morgan St., Marshal	$ 250.00
Joseph Kennefick, 3907 Emerald Ave., Sergeant	125.00
James Haggerty, 3201 Princeton Ave., Sergeant	125.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	125.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	115.00
Daniel D. Curtin, 3313 W. Madison St., Patrolman	115.00
Sylvester O'Brien, 7318 Langley Ave., Patrolman, 23 days	87.18
Michael Plunkett, 100 S. Sangamon St., Patrolman	115.00
Joseph F. Ring, 1210 N. Halsted St., Patrolman, 4 days	14.84
James B. Walsh, 65 E. 42nd St., Patrolman, 27 days	102.00
Emil Klank, 3616 S. Western Ave., Patrolman	115.00
Matthew Tychsen, 812 Massasoit Ave., Patrolman, 23 days	87.18
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	115.00
Edward Morrissey, 157 N. Sheldon St., Patrolman	115.00
Tony Alessi, 2547 Wallace St., Patrolman	115.00
Anton J. Stasch, 2938 N. Springfield Ave., Patrolman, 4 days	14.84
Frank Uczciwek, 1226 Cleaver St., Patrolman	115.00
Anthony Intrieri, 914 W. Polk St., Patrolman	115.00
Wm. Moran, 6229 S. Lincoln St, Patrolman	115.00
John J. Burke, 1252 S. Keeler Ave., Patrolman	115.00
John Conlon, 360 Wendel St., Patrolman	115.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	115.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	115.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	115.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	115.00
R. J. Dooley, 2146 W. 21st Pl., Patrolman	115.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	115.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	115.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	115.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	115.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	115.00

John E. Pierce, 4080 S. Wells St., Patrolman	115.00
Frank Timoney, 732 N. Leavitt St., Patrolman	115.00
James Mooney, 3450 Walnut St., Patrolman	115.00
Herman Tabbert, 1723 Hastings St., Patrolman	115.00
Henry D. Lynch, 5635 S. Wood St., Patrolman	115.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	115.00
Charles A. Ison, 5926 S. Wood St., Patrolman	115.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	115.00
Denis McCaffrey, 3919 Jackson Blvd., Patrolman	115.00
Patrick H. Leahy, 2744 Wentworth Ave., Patrolman	115.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	115.00
Frank Kouba, 656 W. 18th St., Patrolman	115.00
William E. Carter, 829 Simpson St., Evanston, Ill., Marshal, 15 days	125.00
N. C. Van Slooten, 2103 N. Karlov Ave., Patrolman, 8 days	25.81
Wolf Cohen, 1611 S. Trumbull Ave., Patrolman, 8 days	25.81
Edward Marose, 2622 S. Trumbull Ave., Patrolman, 5 days	16.13

Temporary Employes.

John J. Gleason, 3026 Emerald Ave., Patrolman	115.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	115.00
A. J. McVady, 6432 Drexel Ave., Patrolman	115.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
Peter J. Trenz, 1931 Cuyler Ave., Patrolman	115.00
Geo. E. Paul, 4309 N. Ridgeway Ave., Patrolman	115.00
Louis Lorentzen, 3637 N. Sawyer Ave., Patrolman, 24 days	90.89
George A. Keller, 2820 Warren Ave., Patrolman	115.00
J. T. Johnson, Lemont, Ill., Patrolman	115.00
Barney Klecka, 1853 S. Western Ave., Patrolman	115.00
Chas. R. Fross, 801 E. 41st St., Patrolman	100.00
Michael Conway, 1944 N. Lincoln St., Patrolman	100.00
G. Havill, 5634½ Maryland Ave., Patrolman, 25 days	82.26
Joseph W. Doratis, 10455 S. Michigan Ave., Patrolman, 5 days	16.13
Fred O. Wolff, 2023 Superior St., Patrolman, 10 days	32.36
Total	$ 6,730.35

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 500.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	250.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	175.00
O. W. Boers, Chillicothe, Ill., Draftsman	175.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	145.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	120.00
L. H. Welcome, 553 W. 35th St., Computor	115.00
John Markham, 1243 Foster Ave., Chicago, Ill., Rodman	100.00
Total	$ 1,580.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 6.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	5.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	6.00
Joseph Limacher, Minooka, Ill., Gauge Reader	5.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
William Camegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	5.00
M. Brumbach, La Salle Co. Asylum, Ottawa, Ill., Gauge Reader	5.00
Sam G. Belt, 106 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	10.00
John Brookman, Seneca, Ill., Gauge Reader	5.00
George A. Campbell, Marseilles, Ill., Gauge Reader	5.00
Noah Morial, Marseilles, Ill., Gauge Reader	5.00
James McGrogan, Dayton, Ill., Gauge Reader	6.00

C. H. Barnard, C., B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	10.00
George Keeley, Wilmington, Ill., Gauge Reader	5.00
Bernard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	6.00
Peter De Groot, Peru, Ill., Water Sampler and Gauge Reader	10.00
Henry Harbeck, Utica, Ill., Gauge Reader	5.00
David Gleason, DePue, Ill., Gauge Reader	5.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	5.00
Philip Riley, Lacon, Ill., Gauge Reader	5.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	5.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	5.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	5.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	5.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	5.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	5.00
William LeTissier, Bath, Ill., Gauge Reader	5.00
W. L. Waters, Browning, Ill., Gauge Reader	5.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	5.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	5.00
Total	$ 169.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	375.00
Philip Harrington, 117 N. Kildare Ave., Division Engineer	375.00
E. L. Cooley, 136 Indiana Ave., Asst. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Junior Engineer	175.00
J. T. Soderstam, 1211 Newport Ave., Draftsman, 28½ days	163.71
Fred W. Kirk, 68 E. 56th St., Draftsman	160.00
M. P. Williams, 2749 Washington Blvd., Draftsman	160.00
R. G. Galke, 1834 Eddy St., Draftsman	160.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
Nellie McArdle, 8019 Green St., Stenographer	110.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	125.00
Edwin C. Crowe, 2318 N. Kenneth Ave., Tracer	85.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	275.00
Ingolf Erdal, 1504 S. 4th Ave., Maywood, Bridge Computer	200.00
Edwin A. Howes, 5340 Windsor Ave., Bridge Computer	200.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Computer	200.00
Richard DeYoung, 10226 State St., Bridge Draftsman	190.00
George Parker, 1816 Prairie Ave., Computer	120.00
Stanley A. Jankowski, 3222 Wall St., Sub Instrument Man	130.00
F. E. Helmick, 6030 Union Ave., Sub Instrument Man	130.00

Record Division.

Theodore Buskirk, 3903 Ellis St., Resident Engineer	175.00
W. T. Lynch, 5643 Wayne Ave., Record Clerk	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	160.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Computer	130.00
Fred H. Busse, 5818 N. Talman Ave., Computer, 15 days	60.00
E. Edinger, 3259 Indiana Ave., Clerk	115.00
Edna Burke, 11349 Indian Ave., Stenographer	110.00
John F. Harper, 311 E. 45th St., Stenographer	110.00
George Neupert, 75 W. ackson Blvd., Inspector, 6 days	23.23
John Brunton, 5072 Lincoln Ave., Computer, 16 days	61.94

Hydraulic Measurements Division.

John D. O'Donnell, 1048 W. 15th St., Rodman	57.50
Total	$ 7,668.04

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Frank Palermo, 7037 S. Hermitage Ave., Launch Engineer	115.00
John Murphy, 3740 Emerald Ave., Rodman	115.00
Rudolph Christoph, 2139 Melrose St., Superintendent	150.00
Total	$ 1,108.33

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 500.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer	225.00
L. C. Whittemore, 1216 E. 54th St., Asst. Sanitary Engineer	250.00
John R. Palmer, 724 Cuter Ave., Evanton, Asst. Chemist, 29½ days	145.16
Herbert Swanson, 903 N. Central Ave., Asst. Chemist	115.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Junior Engineer	175.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
Walter M. DeBerard, 1418 Howard Ave., Junior Engineer	175.00
G. A. Ripley, 6328 S. Ashland Ave., Head Filter Attendant	110.00
E. A. Morgan, 5418 Loomis St., Harvey, Asst. Chemist, 12 days	58.06
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	125.00
Edward Posthuma 10440 Wentworth Ave., Sub Instrument Man	115.00
John H. Burke, 126 Webster Ave., Filter Attendant	110.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Assistant	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A.	100.00

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	250.00
Arthur A. Bleau, 3141 Princeton Ave., Draftsman	125.00
L. W. A. Bunge, 418 Taylor St., Oak Park, Asst. M. Engineer	150.00
Total	$ 3,278.22

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	$ 375.00
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. B. Barker, 550 E. 50th Pl., Resident Engineer	200.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Junior Engineer	200.00
N. R. Herlihy, 2743 N. Albany Ave., Instrument Man	150.00
Stanley Wiza, 2639 S. 49th Ave., Rodman, 15 days	50.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
John Kolar, 2231 W. 19th St., Computer	120.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Inspector	115.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Inspector	115.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 E. Ohio St., Rodman	115.00
Robert Gilmartin, 3302 S. Seeley Ave., Rodman	115.00
Thomas Doyle, 3527 Lowe Ave., Rodman	115.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
George T. Giles, 4862 Winthrop Ave., Filter Attendant	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00

Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Richard Boegelsack, 10522 Avenue M, Rodman	107.50
Walter Gierszeski, 1409 W. Superior St., Rodman	115.00
J. J. Savage, 407 S. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	115.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	100.00
Total	$ 3,463.50

Blue Island Channel Construction Division.

W. T. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Junior Engineer	175.00
Fred W. Bethig, 11736 S. State St., Inspector, 24½ days	90.81
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector	115.00
Maurice J. Powers, 3621 Union Ave., Rodman	115.00
Edward E. Bochmann, 473 York Pl., Blue Island, Rodman	115.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
Total	$ 1,201.81

Sag Channel Construction Division.

John D. Hurley, 7437 W. 62nd Pl., Asst. Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Rodman	130.00
Richard F. Kelly, 3119 W. 42d Pl., Sub Instrumentman	130.00
Arthur J. Youngberg, 1408 Melrose St., Rodman	115.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Flagman	100.00
Wm. Allen, 1224 W. 32d St., Rodman	115.00
J. P. Sullivan, 944 W. 55th St., Rodman	115.00
Total	$ 1,156.00

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, No. Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer	150.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
John J. Alguire, 3918 Lake Park Ave., Engineer, 19 days	91.94
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Daniel Gleason, 848 Rush St., Engineer and Machinist	150.00
John McGlynn, 3232 Wallace St., Machinist	150.00
Max Nork, 4428 S. Albany Ave., Machinist	150.00
William Lally, 605 W. 31st St., Craneman, 23½ days	92.90
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Chas. Kevil, 4960 Park Ave., Clerk	125.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
F. A. Wagner, 120 W. 113th Pl., Oiler	110.00
M. F. Walsh, 3116 Union Ave., Oiler	110.00
John P. Doyle, 600 W. 31st St., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00

George Carey, 3310 Union Ave., Engineer, 11 days	53.23
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Alec Johnstone, 416 W. 79th Pl., Fireman	110.00
Michael Cronin, 7727 Blackstone Ave., Fireman, 21½ days	78.06
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank Dushek, 3232 Wallace St., Oiler	110.00
Michael Gleason, 3337 Parnell Ave., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler	110.00
Samuel Vanderwell, 10934 Michigan Ave., Laborer	96.00
Arthur Labeau, 4952 Marshfield Ave., Laborer	96.00
John Dorney, 5034 S. Hermitage Ave., 1 day	3.10
Frank Belcastro, 2454 W. Huron St., Laborer	96.00
James Roach, 2949 Lyman St., Laborer, 16 days	49.55
John Buttny, 3755 Hermitage Ave., Laborer, delayed time, 39½ days	123.87
Fred Bergman, 6616 S. Robey St., Fireman, 9 days	31.94
Michael Walsh, 6034 Harper Ave., Laborer	96.00
Patrick Conners, 10603 Lafayette Ave., Laborer, 20½ days	65.03
Frank McGovern, 549 W. 32nd St., Laborer, 23 days	81.32
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 319 W. 25th Pl., Laborer	96.00
James Melville, 2908 Fifth Ave., Laborer	96.00
Thomas McCartan, 1317 W. 98th St, Steam Fitter Helper	17550
Patrick Holland, 4156 Wells St., Steam Fitter	175.50
Bruno Salarno, 2522 Lowe Ave., Oiler	110.00
Cas. Heintz, 215 W. 22nd St., Laborer	96.00
Jos. Dinovo, 624 W. 25th Pl., Laborer, 14 days	43.35
Tony Bagnolia, 216 W. 24th Pl., Laborer	96.00
Henry Lyons, 2948 Bonfield St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
J. Lucy, 2808 Emerald Ave., Oiler	110.00
E. Ryan, 2715 Emerald Ave., Oiler	110.00
M. F. Schopf, 508 S. 9th Ave., Maywood, Engineer	150.00
Con Blocker, 10617 La Salle St., Laborer, 3 days	9.29
Total	$ 5,172.97

LAWRENCE AVENUE PUMPING STATION

James A. Shay, 5300 S. Peoria St., Engineer in Charge	$ 200.00
Thos. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 2144 Warner Ave., Oiler	110.00
Dan O'Hern, 3603 Lowe Ave., Oiler	110.00
James Cullen, 3535 S. Hamilton Ave., Oiler	110.00
George O'Leary, 5705 Union Ave., Oiler	110.00
Patrick Coyle, 700 West End Ave., Fireman	110.00
Albert C. Selle, 429 N. Sawyer Ave., Oiler	110.00
James O'Leary, 349 N. Troy St., Fireman	110.00
Ladislov Sekvenc, 2527 Kedzie Ave., Oiler	110.00
Peter Keniry, 459 W. 38th St., Fireman	110.00
Adam Klein, 2745 Ward St., Fireman	110.00
George Stumpf, 2049 Bingham St., Engineer	150.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave.	110.00
T. J. Reaney, 3838 Park Ave., Janitor	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
Thos. Brannigan, 732 W. Madison St., Laborer	96.00
John A. Miller, 2543 N. Racine Ave., Engineer	150.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter	175.50
Bronislaw Wosny, 2332 N. Maplewood Ave., Oiler	110.00
Pat Grady, 835 W. 54th Pl., Laborer	96.00
Jos. McGuire, 2612 Fullerton Ave., Laborer	96.00
Total	$ 2,831.50

LOCK, DAM AND BRIDGE TENDERS.

M. J. Ryan, Lockport, Ill., Dam Tnder	$ 125.00
Charles J. Case, 3247 W. Division St. , Asst. Dam Tender	100.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, 7140 Emerald Ave., Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
Total	$ 940.00

ELECTRICAL DEPARTMENT.

Executive Division.

G.S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S.WinchesterAve.,Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
Marie Reardon, 7002 Lafiin St., Record Clerk	140.00
Walter F. Kuhneman, 6353 Sangamon St., Clerk, 9 days	36.27
George Bachelder, 4600 S. Troy St., Clerk, 10 days	40.30
May Broderick, 4208 Adams St., Stenographer	110.00
Harriett McAuley 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., Clerk	125.00
Frank A. Stadler, 2906 Lincoln Ave., Clerk	125.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	135.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
John L. Fitzsimons, 5301 Union Ave., Clerk	125.00
Frank F. Hoffman, 2618 Norma 1 Ave., Stenographer	125.00
James Daly, 3633 S. Hamilton Ave., Clerk, 15 days	62.50
Clarence F. Reich, 2703 N. Ashland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3022 Osgood St., Clerk	125.00
Frank J. Martin, 1141 N. Lockwood St	125.00
William Phelan, 6141 Morgan St., Clerk, 16 days	39.92
Leo J. Feeney, 8942 S. Laflin St., Office Boy	60.00
F. F. Anderson, 3719 Ohio St., Inspector, 15 days	87.50

Storeroom.

Thos. F. Lamb, 2713 Crowell St., Storekeeper	150.00
Wm. Smith, 528 N. Homan Ave., Asst. Storekeeper	125.00
John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 502 Emerald Ave., Warehouseman	100.00
Michael Bell, 7929 S. Morgan St., Warehouseman	100.00
John J. Hartnett, 6506 Marshfield Ave., Watchman	96.00
J. P. Lynch, 2842 Emerald Ave., Yard Foreman	124.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
James A. Byrnes, 2137 Warren Ave., Inspector, 15 days	87.50
Chas. Trauth, 2929 Wentworth Ave., 15 days	48.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Thomas Kelly, 220 W. 106th Pl., Inspector	175.00
Fred Meyer, 3510 Broadway, Draftsman	150 00
B. H Young, 4209 Indiana Ave., Carpenter	153.60
C. R. Lyons, 3036 Shields Ave., Carpenter	153.60
J. C. Kraiss, 3327 S. Hamilton Ave., Painter	138.00

Engineering Division.

J. F. Maddox, 4442 Magnolia Ave., Draftsman	200.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00
John Miller, 4449 Lowe Ave., Draftsman, 18 days	89.52

Testing Division.

F. A. DeMuth, 4247 W. 21st St., Testing Engineer	200.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	150.00
R. C. Pedrick, 2418 W. 36th St., Electrician	135.00
H. Hullinger, 1222 W. 31st St., Electrician Helper	110.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	110.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	200.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	150.00
George Enright, 1439 W. Marquette Road, Meter Inspector	125.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	100.00
S. Murphy, 1534 Edgemont Ave., Meter Reader	100.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	125.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	125.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector	100.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	275.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	225.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanston, Stenographer and Clerk	125.00
Jas. A. Haggerty, 3532 Van Buren St., Draftsman	125.00
Lily Howe, 559 W. 37th St., Telephone Operator, 2 days	10.97
Isabel Ward, 548 Glenwood Ave., Telephone Operator, 28 days	79.52
L. A. Jones, 3538 Vernon Ave., Relief Operator	110.00
J. T. Layton, 6511 S. Artesian Ave., Relief Operator	130.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	132.26
Chas. Busch, 56 E. 100th St., Messenger	85.00
M. K. Badke, 2950 Keeley St., Utility Man	100.00
Max Ebler, 2226 Wabash Ave., Relief Operator, 25 days	92.26
J. Mildenberg, 3744 N. Spaulding Ave., Relief Operator	110.00

Underground Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	210.00
J. Sharp, 2324 W. Madison St., Foreman	210.00
J. Lamping, 3016 Congress St., Foreman	175.00
C. C. Wilson, 3214 N. Whipple St., Foreman	175.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	175.00
I. L. Damrow, 6417 S. Campbell Ave., Temporary Foreman	150.00
C. O'Leary, 646 W. 47th Pl., Lineman	150.00
Edward Lee, 6343 Carpenter St., Lineman	150.00
W. F. Jones, 3306 Irving Ave., Lineman	150.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	150.00
James Britton, 3039 Pitney Court, Lineman	150.00
A. Jorgenson, 2153 Keystone Ave., Lineman	150.00
H. Inglebright, 1039 Barry Ave., Lineman	150.00
Owen McLane, 6053 S. Halsted St., Acting Foreman Lineman	150.00
J. R. Weston, 4709 Harrison St., Lineman	150.00
P. B. Simonton, 218 S. Western Ave., Lineman	150.00
Dennis Nolan, 448 Root St., Groundman	100.00
Thomas Woods, 1244 Washington Blvd., Groundman	100.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer	160.13
E. Pearson, 1020 Roscoe St., Cable Splicer	161.88
J. J. Elliott, 1364 E. 61st St., Cable Splicer	176.75
H. J. Berninger, 414 S. Lincoln St., Cable Splicer	137.50
W. Brunsworth, 2921 W. 40th St., Cable Splicer	126.25

J. E. Regan, 4740 N. Ashland Ave., Cable splicer	86.88
T. O'Leary, 316 Aberdeen St., Laborer	87.30
A. J. Peck, 5010 Calumet Ave., Cable Splicer	192.50
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper	136.88
Thos. J. Daly, 4519 Washington Blvd., Cable Splicer Helper	183.75
Patrick Ryan, 3719 Colorado Ave., Cable Splicer Helper	131.25

Inside Maintenance and Construction Division.

Jos. Miller, 944 W. 51st Pl., Foreman, 4 days	21.58
Henry Haag, 2633 Monroe, Repairman	140.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	170.68
R. T. Kelley, 2921 Lowe Ave., Operator	115.00
Paul Matt, 5108 N. Leavitt St., Repairman	140.00
John Weber, 2537 Calvin St., Operator	115.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	115.00

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	225.00
R. G. Close, 513 E. 11th St., Lockport, Operator	165.00
B. F. Konapack, 502 Jasper Ave., Joliet, Operator	150.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	150.00
Geo. Simmons, Lockport, Ill., Asst. Operator	130.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	150.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerberg, 103 Iowa Ave., Joliet, Machinist, 15 days	62.50
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	130.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	130.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	130.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
Robert Curry, 110 Katalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Oiler	125.00
A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist	125.00
P. J. McNamara, Lockport, Ill., Watchman	96.00
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	125.00
M. C. Rich, Lockprt. Ill., Maintenance Man	125.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Laborer	162.00
G. Johnson, Lockport, Ill., Laborer	130.50
P. Roach, Lockport, Ill., Laborer	117.00
J. Boza, Lemont, Ill., Laborer	129.00
M. Powalish, Lemont, Ill., Laborer	130.75
C. Barr, Lockport, Ill., Laborer	138.25
R. Leidig, Lockport, Ill., Laborer	58.50
D. Faletti, Joliet, Ill., Laborer	121.25
A. Rodighiero, Lockport, Ill., Laborer	117.00
P. Lyons, E. 17th St., Lockport, Laborer	128.00
Alf. Johnson, 18th and Jefferson, Lockport, Laborer	110.50
Chas. Carlson, 12th St., Lockport, Laborer	89.50

Terminal.

J. F. Vedder, 6834 Yale Ave., Dispatcher	165.00
W. J. Kloss, 3220 N. Sacramento Ave., Load Dispatcher	165.00
M. T. Coughlin, 434 E. 46th St., Load Dispatcher	165.00
J. S. Black, 6155 S. Laflin St., Load Dispatcher (Relief)	175.00

Edw. Held, 3429 Parker Ave., Switchboard Operator	147.26
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	140.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	130.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator	130.00
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	130.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	140.00

Blue Island.

Harriet Stephens, 65 New St., Blue Island, Clerk	55.00
Wm. H. Greene, 639 York St., Blue Island, Operator	110.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	110.00
Chas. Weber, 230 Walnut St., Operator	110.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	110.00
S. J. Cannon, 1309 Emerson St., Locktender and anitJor	100.00
A. Underdown, 706 Main St., Evanston, Operator	110.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator	110.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator	110.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator	165.00
Knute Anderson, 6324 Wentworth Ave., Operator	130.00
Frank C. Lambert, 5526 S. Lincoln St., Operator	130.00
E. P. Spriegel, 2451 Station St., Operator	130.00

Ashland Avenue.

C. J. Ward, 3001 S. Canal St., Operator	110.00
Wm. D. Cotter, 6125 Justine St., Operator, 23½ days	80.16
H. E. Reilly, 4445 Wallace St., Operator	110.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator	110.00
E. Martin, 1925 Otto St., Temporary Operator	110.00
Frank Davidson, 932 Rush St., Operator	110.00

West Twelfth Street.

W. E. Nancarrow, 4648 Warwick Ave., Operator	110.00
P. J. English, 3416 S. Marshfield Ave., Operator	11000
E. P. DeBarr, 825 George St., Operator	110.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator	110.00
R. Hardell, 3142 N. Robey St., Engineer	140.00
P. Kacyerzewski, 2354 Elston Ave., Operator	110.00

Forest Park.

S. H. Reed, 2742 N. Crawford Ave., Operator	110.00
R. W. C. Newmann, 7416 Washington St, Operator	110.00
A. Stange, 504 Ferdinand St., Temporary Operator	110.00
Thos. Podraza, 1363 W. Chicago Ave., Operator	110.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Engineer	20.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Engineer	10.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Engineer	10.00

Utility Equipment Division.

Wm. J. H. Schultz, 3440 Fulton St., Foreman, 15 days	87.50
Charles H. Kent, 3124 Lowe Ave., Superintendent, 15 days	87.50
B. H. Stuber, 3029 Union Ave., Machinist	135.00
Charles F. Larson, 6718 St. Lawrence Ave., Machinist	125.00
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4407 Normal Ave., Washer, delayed time	176.52

Sidney Smith, 1221 W. Rand St., Washer	96.00
Geo. B. Kelly, 834 N. Springfield Ave., Captain, Robert R	125.00
Thomas J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R	125.00
George H. Gardner, 1732 Clifton Park Ave., Engineer, Robert R	125.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A	100.00
J. E. Greenwald, 4818 Wabansia Ave, Chauffeur	110.00
John Dean, 607 Belden Ave., Chauffeur	110.00
J. Neckerman, 4411 Federal St., Chauffeur	110.00
John Creen, 3002 Emerald Ave., Chauffeur	110.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R	100.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	110.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	110.00
J. McCummisky, 5630 S. Carpenter St., Chauffeur, 4 days	14.19

Temporary Roll—Architectural Division.

Theo. Frantz, 5344 S. Winchester Ave., Laborer	100.00
Pat Conners, 10603 Lafayette Ave., Laborer	100.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Acting Foreman	175.00
A. R. Verschave, 7836 S. Carpenter St., Lineman	150.00
Wm. G. Zepp, 5749 Drexel Ave., Lineman	150.00
Frank Hobbs, 2704 Warren Ave., Lineman	150.00
Thos. Lane, 5740 S. Lincoln Ave., Lineman	100.00
Frank Guibard, 5731 Aberdeen St., Lineman	150.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	150.00
John J. Dassie, 3616 W. 83rd St., Lineman	150.00
J. M. Kelly, 6147 Newberry Ave., Lineman	150.00
D. McAvoy, 3317 W. Madison St., Lineman	150.00
W. Glass, 3738 Madison St., Lineman	150.00
Michael Hogan, 1507 W. 76th Pl., Groundsman	100.00
Joy McConkey, 2903 Warren Ave., Lineman	150.00
Jos. Allard, 3117 Normal Ave., Chauffeur	110.00
F. S. Allen, 026 Washington Blvd., Lineman	150.00
Thos. J. Falls, 5661 Shields Ave., Lineman	150.00
James F. Barry, 218 S. Western Ave., Lineman	150.00
T. A. Singer, 3718 Grand Ave., Lineman	150.00
George Mitchell, 3159 Emerald Ave., Lineman	100.00
Peter Hart, 348 W. 30th St., Lineman	100.00
Nicholas Martin, 350 W. 30th Pl., Lineman	100.00
P. L. Englert, 3038 Wallace St., Lineman	100.00

Temporary Inside Maintenance and Construction Division.

Thos. Sheehan, 2476 Albany Ave., Repairman	140.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	140.00
H. J. O'Connell, 6157 Michigan Ave., Asst. Repairman	115.00
Total	$ 29,996.03
Grand Total	$ 81,325.45

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.
The motion prevailed.

John W. Gillen,
Clerk.

8.09773
C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, MARCH 6, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The Clerk called the roll and there were:

Present—Mr. Sergel—One.

Absent—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

There being no quorum, President Sergel declared the meeting adjourned.

John W. Gillen,
Clerk.

C438

APR 12 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, MARCH 13, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The Clerk called the roll and there were:

Present—Messrs. Sergel and Nance—Two.

Absent—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

There being no quorum, President Sergel declared the meeting adjourned.

John W. Gillson,
Clerk.

28.09773
C73s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, MARCH 20, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Clark—One.

BIDS.

The Clerk opened and read the bids received for 5,000 and 12,000-volt multiple conductor cable, as shown in the schedule appearing on page 262 of the Proceedings.

Mr. Lawley moved that the bids be referred to the Electrical Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

THE SANITARY DISTRICT OF CHICAGO—ELECTRICAL DEPARTMENT.

Proposals Received for 5,000 and 12,000 Volt Multiple Conductor Cable.
Chicago, March 13, 1919.

No. of Bids.	Name and Address of Bidders.	Deposits.	Price per Foot of 12,000-volt, Three Conductor, Lead Covered Cable. No. 0000	Price per Foot of 5,000-volt, Four Conductor, Lead Covered Cable. No. 0000	Prices to be Charged and Credit to be Allowed on Reels.		
					Size of Reel.	Price Each.	Credit Each.
1	General Electric Co.....	$1,000.00	$1.59	$1.09	60″ x 24″ 60″ x 41″	$30.00 30.00	$30.00 30.00
2	Simplex Wire & Cable Co....	1,000.00	1.765	1.380	66″ 72″	40.00 50.00	40.00 50.00
3	The Safety Insulated Wire & Cable Co.....	1,000.00	1.65	1.42	66″ x 36″	20.00	20.00
4	Standard Underground Cable Co.	1,000.00	1.697	1.555	60″ 64″	32.00 32.00	32.00 32.00
5	John A. Roebling Sons Co....	1,000.00	1.74	1.70	48″ x 30″ 66″ x 30″	20.00 30.00	20.00 30.00
6	Habirshaw Electric Cable Co., Inc.	1,000.00	1.70028	1.42853	66″ x 34″	35.00	35.00

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meetings of February 27, March 6 and 13, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The President presented the following message:

CHICAGO, March 20, 1919.

To the Honorable, the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I return without my approval the order passed by the Board of Trustees of The Sanitary District of Chicago on February 27, 1919, by which A. Guthrie & Co., Inc., contractors with the Sanitary District for the construction of Sections 13 and 14 of the Calumet-Sag channel, are authorized to change the method of doing the work on Section 13 at an additional expense to the Sanitary District of $35,000, under the extra work clause of the contract.

This contract was entered into near the end of 1915, and was to be completed by January 1, 1918, thus providing two working seasons. The failure to perform all the work by the specified time was due undoubtedly to complications concerning the railroad bridges and to war conditions. Section 14, however, had no railroad bridges and war conditions did not begin to have material effect until the men under the first draft began to assemble in September, 1917. By August, 1917, the work on Section 14 was nearly finished, for according to the engineer's report 86.7 per cent had been done. At the same time 19.5 per cent of Section 13 had been performed. By the beginning of this year, 1919, 58.4 per cent of Section 13 had been accomplished and 99.8 per cent of Section 14. In other words, counting the two sections together, as they are combined in the contract, only about 21 per cent of the entire work remains to be done.

The contract price for excavating glacial drift is 28.4 cents per cubic yard, and 80 cents for rock. Altogether 1,274,729 cubic yards have been excavated, at an average price of about 43 cents. This order would now provide an additional price of 55 cents per cubic yard chiefly for rehandling 64,000 cubic yards remaining between the railroads and Section 12.

By the terms of the contract 40 per cent of the entire work was to be done the first year, and the remaining 60 per cent the second year. Although the contractor entered into a contract to do 60 per cent of the work in a single year, it is now stated that it will take two years to do 21 per cent, and it is proposed to pay $35,000 extra to have the work finished in one year! Such a payment would appear to be the equivalent of a gift.

If the opening date of the Calumet-Sag Canal could be advanced a year by the payment of this sum, and if that were the only possible way, I would be glad to accept the terms, for even the partial keeping of the sewage out of the lake would be cheap at the price. While the Calumet river in ordinary weather will no doubt reverse its flow, at least in part, flood times will find the sewage-saturated stream still discharging in Lake Michigan. Not until the Calumet intercepting sewer is finished and the pumping plant is built, and this will not be for nearly two years to come, will the Calumet-Sag canal be fully effective in its purpose of keeping the sewage out of the lake. Certainly it is our duty to expedite the work as much as possible.

In this case the most effective and the most equitable way to get Section 13 finished in a year is to compel the contractor to fulfill his contract. The completion of the work is already one year behind and, if accomplished this year, will be two years behind the contract

date. An allowance of two years' delay on account of adverse circumstances certainly seems ample. Bridge complications seem to be at an end. War conditions are rapidly ameliorating. Labor is becoming plentiful. The contractor certainly can perform the small remaining work within the year. If he can, he should. No bonus should be necessary to induce him to do his duty.

CHARLES H. SERGEL,
President The Sanitary District of Chicago.

Mr. Lawley moved that the vote by which the report was adopted and the order passed, at the regular meeting of February 27, 1919 (page 207 of the Proceedings), authorizing and directing the Chief Engineer to order A. Guthrie & Co., Inc., contractor for the excavation and collateral work on contract section 13 of the Calumet-Sag Channel, to perform certain work specified in said report under the extra work clause of said contract, be reconsidered.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Carr—One.

Mr. Lawley moved that said report and order be referred to the Committee on Engineering for further report.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Carr—One.

The Clerk presented his report of money received and deposited with the Treasurer during the month of February, 1919, which was ordered published and filed, as follows:

CHICAGO, March 13, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of Seventy-nine Thousand, Five Hundred Twenty-nine and Thirty-six Hundredths ($79,529.36) Dollars, during the month of February, 1919, from the following sources:

The Stock Yards Industries (C. A. Alling, Chairman Stock Yards Committee), being part payment on account of our bill dated December 31, 1918	$ 6,613.13
The Standard Paint Company, being annual rental from April 1, 1918, to March 31, 1919, for two pipe lines used for condensing purposes	500.00
United States Crushed Stone Company, being payment of judgment note due February 1, 1919	333.33
The Crane Company, being amount of their credit memorandum for return of material	164.44
The Consolidation Company, being refund on carload of sand not received by The Sanitary District of Chicago	60.94
Chicago Steel Foundry Company, being amount received for return of defective casting	13.68
Wm. T. Lynch, Record Clerk, being amount received from sundry persons for personal telephone calls	7.20
The Peoples Gas Light & Coke Company, being semi-annual rental from February 1 to June 30, 1919, for land under lease dated February 1, 1916, along the Main Channel	2,738.00
Amount carried forward	$ 10,430.72

Amount brought forward		$ 10,430.72
Van Fleet Shops, being monthly rental for month of March, 1918, as per lease dated July 1, 1917		75.00
N. Cordano, being annual rental of land for pasturage purposes for the year 1918		20.00
Sundry Consumers, for electric power and light	$ 57,112.45	
South Park Commissioners, for power and light for the month of December, 1918	2,668.96	
West Chicago Park Commissioners—		
For power and light for months of November and December, 1918	$2,377.81	
Interest and depreciation for months of November and December, 1918	224.28	
	2,602.09	
Commissioners of Lincoln Park—		
For power and light for December, 1918	$1,417.59	
Interest and depreciation for December, 1918	69.45	
	1,487.04	
Village of South Holland—		
For power and light for months of November and December, 1918	$ 664.44	
Interest and depreciation for months of November and December, 1918	43.38	
	707.82	
Village of Dolton—		
For power and light for December, 1918	$ 621.60	
Interest and depreciation for December, 1918	18.65	
	640.25	
Town of Cicero, power and light for December, 1918	499.80	
City of Blue Island—		
For power and light for November and December, 1918	$ 155.73	
Interest and depreciation for November and December, 1918	181.56	
	337.29	
Village of Summit—		
For power and light for December, 1918	$ 293.16	
Interest and depreciation for December, 1918	32.98	
	326.14	
Village of Evergreen Park—		
For power and light for December, 1918	$ 224.19	
Interest and depreciation for December, 1918	26.87	
	251.06	
City of Berwyn—		
For power and light for January, 1919	$ 114.63	
Interest and depreciation for January, 1919	15.00	
	129.63	
Village of Wilmette, for power and light for December, 1918	126.90	
Amount carried forward		$ 10,525.72

Amount brought forward		$ 10,525.72
Village of Lyons, for power and light for months of November and December, 1918	62.59	
State of Illinois, for power and light for December, 1918	31.94	
Village of Stickney, for power and light for December, 1918	14.25	
Wilmette Park District, interest and depreciation for months of November and December, 1918	10.00	
Humphries & Sons, purchase price of material sold them	1,279.75	
South Park Commissioners, repairing cable at 67th and B. & O. Railroad	363.99	
Wilmette Park District, setting up lighting service at skating rink in Wilmette	152.44	
Sundry Power Consumers, rental of meters for month of January, 1919	114.00	
Lally Column Company	48.96	
The Texas Company, return of empty barrels	22.45	
The National Malleable Casting Company, repairing transmission lines	4.65	
Sam J. Garvin	3.74	
C. A. Netz, account personal telephone calls	2.00	
S. H Reed, account personal telephone calls	1.95	
J. Eloney, installation service	1.50	
		69,003.64
Grand Total		$ 79,529.36

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by the attached receipt.

Respectfully submitted,

JOHN MCGILLEN,
Clerk.

CHICAGO, March 13, 1919.

$79,529.36.

Received from John McGillen, Clerk, the sum of Seventy-nine Thousand, Five Hundred Twenty-nine and Thirty-six One-hundredths ($79,529.36) Dollars, on the dates and in amounts as follows:

February 1	$ 333.33
February 3	4,582.00
February 4	256.68
February 5	255.30
February 6	768.96
February 7	1,721.55
February 8	205.72
February 11	1,037.28
February 13	5,931.01
February 14	10,186.80
February 15	2,265.41
February 17	8,592.02
February 18	6,019.13
February 19	5,962.34
February 20	19,411.02
February 21	1,793.70
February 24	2,533.45

February 26	2,234.62
February 27	56.83
February 28	5,382.21
Total	$ 79,529.36

To be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

Electrical Department	$ 69,003.64
The Stock Yards Industries (C. A. Alling, Chairman Stock Yards Committee)	6,613.13
Land Revenue	2,833.00
United States Crushed Stone Company	333.33
Water Service	500.00
Pumping Stations Maintenance and Operation	178.12
Main Channel Extensions Maintenance and Operation	60.94
Miscellaneous Engineering Operating Expense	7.20
Total	$ 79,529.36

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The Clerk presented the report of the Treasurer for the month of February, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR FEBRUARY, 1919.

Balance on hand at date of last report $1,159,742.67

Receipts.

Electrical Department	$ 69,003.64	
Land Revenue Account	2,833.00	
Water Service Account	500.00	
Stock Yards Industries (C. A. Alling, Chairman Stock Yards Committee)	6,613.13	
United States Crushed Stone Company	333.33	
Pumping Stations Maintenance and Operation	178.12	
Main Channel Extensions Maintenance and Operation	60.94	
Miscellaneous Engineering Operating Expenses	7.20	
Interest on Bank Balance, Geo. M. Reynolds, Treasurer	1,819.01	
Total cash received for month		81,348.37
		$1,241,091.04

Expenditures.

Construction Accounts	$ 78,564.35
Maintenance and Operation Accounts	38,350.08
Illinois & Michigan Canal and Illinois River Conditions Department	2,114.08
Law Department	7,018.82
Land Damages Account	271.65
Cost of Law Cases	800.00
Clerical Department	2,794.13
Treasury Department	255.33
Real Estate Department	451.85
Taxes on District Property, Will County, Illinois	4,582.01
Police Department	6,053.33
General Account	10,740.97
Bond Account	28,000.00

Interst and Premium on Bonds	4,400.00
Electrical Department	55,885.08
Total cash disbursed	$ 240,281.68
Balance this date in banks, as per schedule endorsed hereon	1,000,809.36
	$1,241,091.04

GEORGE M. REYNOLDS,
Treasurer.

By J. R. WASHBURN,
Asst. Treasurer.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Finance reports that it has duly considered the resolution referred to it by the Board on February 20, 1919 (page 197 of the Proceedings), which directed the preparation of specifications for the purchase of lubricating oils and gasoline to supply the needs of the Sanitary District for the remainder of the year 1919, and that said supplies should be advertised for.

Your Committee further reports that it is of the opinion that it is advisable that specifications for the purchase of said supplies be prepared by the Chief Engineer and Electrical Engineer of the Sanitary District, and when prepared transmitted to your Committee for its approval, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer and Electrical Engineer be and they are hereby authorized and directed to prepare specifications for the purchase of lubricating oils and gasoline required to supply the needs of the Sanitary District for the remainder of the year 1919, and when prepared to transmit the same to your Committee for its approval.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was lost by the following vote:

Yeas—Messrs. Sergel, Healy, Mueller and Nance—Four.

Nays—Messrs. Carr, Lawley, Littler and Paullin—Four.

Mr. Lawley moved that the report and order be referred to the Committee on Finance.

The motion prevailed.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Finance herewith transmits warrant No. 46692 of Charles J. Forsberg, City Collector of the City of Chicago, for five installments of a special assessment for paving Ainslie street, on the right of way of the North Shore Channel levied against certain real estate of the Sani-

tary District therein described, situated in the City of Chicago, to-wit:

First installment	$ 534.53
Second installment	347.68
Third installment	347.68
Fourth installment	347.68
Fifth installment	347.68
	$1,925.25
Interest at 5% from September 24, 1918 to March 24, 1919...	38.14
Total	$1,963.39

Your Committee further reports that it has examined said bill, is of the opinion that same is correct and should be paid, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk be, and they are hereby, authorized and directed to draw a warrant in the sum of $1,963.39, payable to Charles J. Forsberg, City Collector of the City of Chicago, and deliver the same to him in full payment of said special assessment.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Carr—One.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Finance begs to report that the semi-annual interest on the eleventh, seventeenth and twenty-sixth issues of the bonds of The Sanitary District of Chicago, amounting to the sum of twenty-one thousand five hundred and sixty ($21,560) dollars, falls due April 1, 1919, as follows:

On $250,000 of the 11th issue at 4 per cent	$ 5,000.00
On $192,000 of the 17th issue at 4 per cent	3,840.00
On $636,000 of the 26th issue at 4 per cent	12,720.00

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby, authorized and directed to draw a warrant payable to the Treasurer of The Sanitary District of Chicago, for the sum of $21,560, to pay the semi-annual interest due April 1, 1919, on the eleventh, seventeenth and twenty-sixth issues of bonds of The Sanitary District of Chicago.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Finance reports that on October 24, 1918, in accordance with the order of the Board, the Clerk of the Sanitary District issued warrant No. 97966 for $8.00 on the Treasurer of the Sanitary District, payable at the Continental and Commercial National Bank, to the order of Sweet, Wallach & Company, in payment for merchandise sold and delivered to said Sanitary District. Said company reports that said warrant was lost and that said bank was notified not to pay same. Said company now requests that a duplicate warrant for said amount be issued.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk of The Sanitary District of Chicago be, and he is hereby, authorized and directed to issue a duplicate warrant in the sum of $8.00 payable to the order of Sweet, Wallach & Company and deliver the same to it in lieu of said lost warrant above specified when said company executes a bond to indemnify the Sanitary District against loss because of the issuance of said new warrant.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 13, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of March payrolls, for payment on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payrolls First Half of March, 1919.

John McGillen, Clerk (general payrolls)	$ 26,736.83

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 121.23	
John McGillen, Clerk (expenses of employes)	106.19	
John McGillen, Clerk (expenses of employes)	38.83	
Nash-Dowdle Company (pumping service, Evanston, Ill.)	775.00	
John McGillen, Clerk (payroll Stock Yards Testing Station)	154.00	
Jas. O. Heyworth (material furnished)	90.85	
John F. Klein (teaming)	78.00	
Wisconsin Lime & Cement Company (coal)	25.00	
McCallum & Clark (rent)	25.00	
Peth & Goeler (repairs to transits and level)	19.00	
J. W. Landis (stakes)	15.52	
Amounts carried forward	$ 1,448.62	$ 26,736.83

Amounts brought forward	$ 1,448.62	$ 26,736.83
C. E. Reading (coal)	13.40	
Augusta Rau Schwartz (rent)	12.00	
United States Rubber Company (boots)	10.40	
Public Service Company of Northern Illinois (electrical energy)	5.33	
Hinckley & Schmitt, Inc. (Waukesha water)	5.02	
Burr-Vack Company (binder)	1.79	
Burr-Vack Company (diary)	1.74	
Kueffel & Esser Company (scale)	.60	
Public Service Company of Northern Illinois (electrical energy)	.50	
		1,499.40

Maintenance and Operation Account.

John McGillen, Clerk (special roll 39th St. Pumping Station)	$ 240.00	
John McGillen, Clerk (special roll, repairs to Main Channel bridges and Controlling Works)	212.10	
John McGillen, Clerk (special roll repairs to Main Channel extension bridges)	189.80	
John McGillen, Clerk (special roll Lawrence Ave. Pumping Station)	153.40	
John McGillen, Clerk (special roll Lawrence Ave. Pumping Station)	105.40	
Commonwealth Edison Company (Mazda lamps)	54.19	
Chicago Fire Brick Company (Crown fire bricks)	30.38	
Theo. B. Robertson Products Company (metal polish)	22.05	
Theo. B. Robertson Products Company (soap powder)	13.52	
John McGillen, Clerk (freight paid I. C. R. R. for hauling fuel to 39th St. Pumping Station)	155.01	
John McGillen, Clerk (special roll repairs to boilers, Lawrence Ave. Pumping Station)	133.50	
John McGillen, Clerk (state license)	16.00	
John McGillen, Clerk (railroad ticket, 25 rides to Joliet)	15.44	
Scully Steel & Iron Company (blow-off valves)	305.66	
Green Engineering Company (material)	201.12	
American Steam Conveyor Corporation (pipe)	191.10	
Lynch-Clarisey Company (boiler compound)	126.83	
The Berkshire Company (paper)	122.66	
Sullivan Oil Company (oil)	115.72	
The Jeffrey Mfg. Company (repairs to coal crusher)	90.50	
Henry M. Joda (repairs to windows, Lawrence Ave.)	74.00	
Burr-Vack Company (stationery)	71.09	
Burr-Vack Company (supplies)	64.05	
Adolph Sturm Company (labor and material)	60.00	
Jos. T. Ryerson & Son (steel bars)	58.77	
H. W. Johns-Manville Company (cement)	54.00	
Geo. B. Carpenter & Co. (flax packing)	48.66	
Paragon Metal Products Company (castings)	44.10	
Buissono Bros. (labor account of repairs)	38.11	
Crane Company (repairs)	38.00	
American Steam Gauge & Valve Mfg. Company (recording gauge)	33.00	
Fairbanks-Morse Company (superintending repairing work track scale)	30.60	
G. Johnson (teaming)	30.00	
G. Johnson (teaming)	27.00	
American Supply Company (sanitary wipers)	26.01	
Advance Packing & Supply Company (governor)	25.00	
The Berkshire Company (bond paper)	22.05	
Amounts carried forward	$ 3,238.82	$ 28,236.23

Amounts brought forward	$ 3,238.82	$ 28,236.23
Kirby Motor Trucking Company (cartage charges)	21.43	
Crosby Steam Gauge & Valve Company (new steam springs)	17.10	
Hinckley & Schmitt, Inc. (drinking water)	17.00	
Standard Sanitary Mfg. Company (pipe fittings)	16.77	
Stebbins Hardware Company (washers, bolts, etc.)	14.79	
Geo. L. Hammons, Inc. (packing)	13.89	
Geo. L. Hammons, Inc. (emery cloth)	1.50	
Parker's Towel Supply Company (towel service)	12.20	
Theo. B. Robertson Products Company, Inc. (metal polish)	10.58	
Mike Riess (teaming)	10.00	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
The Carl Anderson Company (repairs)	6.75	
John Bigane & Sons (coal)	6.55	
Thos. B. Banner (drip pan)	6.25	
Kirby Motor Trucking Company (cartage charges)	6.12	
Standard Oil Company (kerosene)	6.00	
Auto Radiator Mfg. Company (repairs)	4.50	
Stewart Ice Company (ice)	4.50	
Green Engineering Company (bolts and chain)	4.20	
Edwards & Bradford Lumber Company (coal)	4.10	
Dan Smith Motor Company (fan belt, etc.)	3.75	
Henry M. Joda (labor and material)	3.48	
Miller Hardware Company (strap hinges, etc.)	1.95	
Parker's Towel Supply Company (towel service)	1.60	
		3,442.33
Illinois & Michigan Canal and Illinois River Conditions Department.		
F. E. Bacon, Tax Collector, Chillicothe (taxes)	$ 45.30	
Public Service Company of Northern Illinois (electrical energy)	30.21	
Standard Oil Company (gasoline)	23.00	
Chillicothe Auto Company (auto repairs, etc.)	18.05	
John Wood (rent)	10.00	
Mrs. Elizabeth Kinlock (rental)	10.00	
Burr-Vack Company (standard diary)	8.94	
Peoples Telephone Company (telephone service)	8.70	
N. Thompson (chimney jack)	3.90	
		158.10
Law Department.		
Martin Delaney (services rendered and expenses)	$ 174.83	
Robt. S. Leete & Co. (carbon paper, etc.)	156.50	
Robt. S. Leete & Co. (association bond)	120.00	
The Globe Wernicke Company (typewriter desk and chair)	84.16	
Central Electric Company (desk lamp)	4.50	
West Publishing Company (subscription)	4.00	
West Publishing Company (subscription)	3.50	
Burr-Vack Company (set of typewriter keys)	3.50	
Wm. Prestien (picking lock and repairing)	2.00	
Callaghan & Co. (Illinois Appellate Reports)	1.65	
Underwood Typewriter Company (adjusting typewriter)	.75	
		555.39
Clerical Department.		
Burr-Vack Company (repairing inker, pencils, etc.)	$ 27.89	
The Fred J. Ringley Company (plain envelopes)	3.50	
		31.39
Real Estate Department.		
John Naghten & Co. (insurance charges)	$ 15.67	
The Fred J. Ringley Company (letterheads)	3.00	
		18.67
Amount carried forward		$ 32,442.11

Amount brought forward		$ 32,442.11
Police Department.		
The Fred J. Ringley Company (printing)	$ 10.00	
Chicago Telephone Company (telephone service)	6.10	
		16.10
General Account.		
John McGillen, Clerk (postage stamps)	$ 175.00	
John McGillen, Clerk (expenses of employe)	22.18	
The Chicago Evening Post Company (advertising)	290.40	
Marshall Field & Co. (chairs and phone table)	99.50	
John M. Buckley (engrossing resolution of death of Theodore Roosevelt)	60.00	
Walter E. Beebe (expenses incurred on trip to Springfield account legislative matters)	27.08	
Gulick-Henderson Company (moisture ash)	15.00	
Hinckley & Schmitt, Inc. (drinking water)	51.00	
Commonwealth Edison Company (Mazda lamps)	27.65	
Parker's Towel Supply Company (towel service)	26.00	
Chicago Telephone Company (telephone service)	24.72	
Chicago Telephone Company (telephone service)	15.42	
20th Century Press Clipping Bureau (clippings)	10.19	
Burr-Vack Company (Perfection calendar, etc.)	3.60	
Walden W. Shaw Livery Company (automobile service)	1.45	
		849.19
Electrical Department.		
John McGillen, Clerk (expenses of employes)	$ 370.61	
John McGillen, Clerk (weekly payroll)	219.70	
John McGillen, Clerk (expenses of employes)	168.06	
Central Electric Company (knife switches)	12.21	
Litsinger-Davis Oil Company (gasoline)	75.90	
John McGillen, Clerk (semi-monthly payroll)	15,911.78	
John McGillen, Clerk (semi-monthly payroll)	16,110.58	
John McGillen, Clerk (weekly payroll)	237.80	
John McGillen, Clerk (weekly payroll)	254.00	
John McGillen, Clerk (postage stamps)	125.18	
John McGillen, Clerk (expenses of employe)	9.30	
John McGillen, Clerk (water taxes)	6.94	
John McGillen, Clerk (water taxes)	5.16	
Western Electric Company (conduit, etc.)	392.35	
Western Electric Company (cross arms, etc.)	279.40	
Commonwealth Edison Company (integrating wattmeters)	214.50	
Commonwealth Edison Company (switchboard bolts and nuts)	50.27	
Humphrey & Sons Company (cut cast iron gear, etc.)	197.24	
Weil Bros. (Blakeslee jet pump, etc.)	189.31	
O. Frenzel (teaming)	163.18	
The Fred J. Ringley Company (envelopes, etc.)	156.00	
Bentley, Murray Company (progress reports, etc.)	142.00	
Westinghouse Electric & Mfg. Company (relays, etc.)	135.00	
Wellman-Seaver-Morgan Company (bell crank bracket etc.)	127.00	
The Grasselli Chemical Company (carboys, etc.)	112.92	
Commercial Tire & Auto Company (solid tire pressed on steel base)	110.20	
The Lombard Governor Company (hand wheel bracket, complete, etc.)	109.20	
The Texas Company (oil, etc.)	95.70	
Barrett Hardware Company (pipe, etc.)	93.95	
The Lord & Bushnell Company (lumber)	75.54	
Amounts carried forward	$ 36,150.98	$ 33,307.40

Amounts brought forward	$ 36,150.98	$ 33,307.40
Wilbur J. Connell (brass washers, etc.)	71.59	
National Lead Company (genuine babbitt)	68.35	
Wm. Sorgenfrei (rent)	60.00	
The Wm. H. Reid Company (engine oil, etc.)	58.44	
New York Belting & Packing Company (leather belt, etc.)	54.43	
The Wilson Rubber Company (rubber gloves)	46.20	
Patrick Brennan (personal injuries)	45.00	
Stebbins Hardware Company (washers, etc.)	37.94	
John Bigane & Sons (coal)	37.50	
The Fred J. Ringley Company (printing)	31.14	
Famous Sales Company (oil soap)	36.87	
The Lundin Electric & Machine Company (coils)	30.62	
G. Johnson (teaming)	30.00	
The Texas Company (gasoline and kerosene)	27.98	
Garrett J. Cushing (personal injury)	26.00	
John Wohlgemuth (teaming)	22.50	
H. M. Hooker Glass & Paint Company (wood alcohol, etc.)	21.77	
Geo. B. Carpenter & Co. (galvanized ship cleat, etc.)	21.27	
Vesta Accumulator Company (brackets, etc.)	20.87	
Geo. L. Hammons, Inc. (steel lacing, etc.)	17.79	
American Supply Company (sanitary wipers)	16.38	
Wilbur J Connell (squegees, etc.)	15.60	
Chicago Feather Duster Company (dusters, etc.)	14.11	
Parker's Towel Supply Company (towel service)	12.25	
Bliss & Laughlin (steel shafting, etc.)	12.99	
James Carmichael (plumbing)	11.50	
H. W. Johns-Manville Company (cement)	10.80	
Geo. L. Hammons, Inc. (emery wheel, etc.)	10.39	
Stebbins Hardware Company (shovels, etc.)	9.65	
Standard Oil Company (gasoline)	9.20	
The Berkshire Company (manuscript covers)	8.82	
Rienzi Garage (skid chains)	8.40	
Consumers Company (ice)	8.33	
Becker Bros. (brushes, etc.)	6.88	
Burr-Vack Company (transfer cases)	6.00	
Burr-Vack Company (gum paper)	5.30	
Chicago Surface Lines (bracket fronts)	4.72	
Geo. B. Carpenter & Co. (upright blocks)	4.20	
Stewart Warner Speedometer Corporation (sliding coupling)	4.00	
Barrett Christie Company (Trimo wrench, etc.)	3.14	
Alfred Getter (return of over-payments)	2.42	
Addressograph Company (45 complete addresses)	1.74	
Underwood Typewriter Company (adjusting machine)	.75	
		37,104.81

Miscellaneous Accounts.

John McGillen, Clerk (special roll, moving Stock Yards Testing Station, shoveling coal at Lawrence Ave. and 39th St., building weirs account sewage discharge plant)—			
Construction Account	$ 303.40		
Maintenance and Operation Account	154.80		
		$ 458.20	
John McGillen, Clerk (special roll, repairs to scows, Stock Yards Testing Station, shoveling coal at Lawrence Ave. and 39th St., building weirs)—			
Construction Account	$ 104.40		
Maintenance and Operation Account	193.20		
		297.60	
Amounts carried forward		$ 755.80	$ 70,412.21

Amount brought forward		$ 755.80	$ 70,412.21
John McGillen, Clerk (special roll, Stock Yards Station)—			
Construction Account	$ 115.20		
Maintenance and Operation Account	28.80		
		144.00	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 100.05		
Maintenance and Operation Account	43.86		
		143.91	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 21.45		
Maintenance and Operation Account	23.84		
		45.29	
John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 2.26		
Clerical Department	15.42		
General Account	1.00		
Electrical Department	5.60		
		24.28	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 92.76		
Maintenance and Operation Account	10.81		
Law Department	4.65		
Real Estate Department	5.87		
General Account	.81		
		114.90	
E. H. Heilbron (expenses)—			
Illinois Valley Department	$ 13.17		
Law Department	13.17		
		26.34	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 32.00		
Maintenance and Operation Account	44.86		
Police Department	.10		
		76.96	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 43.37		
Maintenance and Operation Account	15.10		
		58.47	
Hotel Atlantic (expenses of Heilbron and Dugan)—			
Illinois Valley Department	$ 33.95		
Law Department	34.40		
		68.35	
			1,458.30
Grand Total			$ 71,860.51

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEO. W. PAULLIN.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Engineering.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Commtitee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the reinforcing steel to be used in the Evanston Sewage Pumping Station has been ordered, and that it will be necessary to test said material at the mill where it is rolled.

He further states that in order not to delay the work, he directed Modjeski and Angier to perform the inspection work at a cost of not to exceed $50.00, and requests that his action in the premises be ratified and confirmed.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the action of the Chief Engineer in employing Modjeski and Angier to test the material above specified, at a cost of not to exceed $50.00, be and the same is hereby ratified and confirmed.

Respectfully submitted,

H. E. LITTLER,
Vice Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Assistant Chief Engineer in which he states that it is necessary to remove the invert of approximately 272 feet of the Desplaines River Intercepting Sewer, Contract No. 1, on First avenue in Maywood, and rebuild the same to a grade two feet lower than originally constructed, and he requests that he may be authorized to order Nash Bros., the contractors for said intercepting sewer, to perform said work under the extra work clause of their contract at an estimated cost of $4,000.00.

Your Committee, having considered the matter, recommends the passage of the following order.

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to order Nash Bros. to perform the work above specified under the extra work clause of their contract for the construction of the Desplaines River Intercepting Sewer, Contract No. 1, provided the cost of the same shall not exceed the sum of $4,000.00.

Respectfully submitted,

H. E. LITTLER,
Vice Chairman.
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Assistant Chief Engineer in which he states that on November 2, 1916 (page 1443 of the Proceedings), the Sanitary District entered into an agreement with the Baltimore & Ohio, Chicago Terminal Railroad Company, the Grand Trunk Western Railway Company and Jacob M. Dickinson, receiver of the Chicago, Rock Island & Pacific Railway Company, by the terms of which certain filling, tracklaying and ballasting made necessary by the removal and relocation of certain tracks of said railroad companies at the crossing of said railroads and the Calumet-Sag Channel of the Sanitary District was to be done at the expense of the Sanitary District.

He further states that the Baltimore & Ohio, Chicago Terminal Railroad Company, which was designated to perform said work, has informed him that it has been unable to obtain the money to do said work and until it can obtain funds from the Sanitary District on bills rendered or from other sources, it will be unable to proceed.

He further states that during the winter 1917-1918 and the entire year of 1918, similar work has been performed by A. Guthrie & Co., Inc., under the extra work clause of its contract with the Sanitary District, for the excavation and construction of Section 13 of the Calumet-Sag Channel, under authority passed by the Board, November 8, 1917 (page 1491 of the Proceedings), because the railroad company was unable to obtain sufficient labor to do the work and had requested the Sanitary District to have the same done, and pay the cost of same directly to said contractor.

He further states that said contractor resumed work at the site in question during the present month, in excavating for the substructure of said company's bridge, which work necessitates the care and support of the existing tracks of said Baltimore & Ohio, Chicago Terminal Railroad Company, immediately adjoining the excavation, and unless the work is performed by said railroad or the Sanitary District, A. Guthrie & Co., Inc., must suspend work at said site and the completion of said channel will be delayed for the length of time that such work is suspended.

He further states that said work will cost less if performed for the Sanitary District than if done by the railroad company itself and recommends that he be authorized to direct A. Guthrie & Co., Inc., to perform said work under the extra work clause of its contract, for the excavation and collateral work on Section 13, of the Calumet-Sag Channel.

Your Committee having considered the matter, is of the opinion that said work should be done in the manner suggested by the Chief Engineer, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to direct A. Guthrie & Co., Inc., to perform the work above specified under the extra work clause of its contract, for the excavation and collateral work on Section 13 of the Calumet-Sag

Channel, provided the cost of the same shall not exceed the sum of $10,000.00.

Respectfully submitted,

H. E. Littler,
Vice Chairman.

Jas. H. Lawley,
Matt. A. Mueller,
Patrick J. Carr,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

Chicago, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

Gentlemen—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in order to make an exhaustive study of the proper method of caring for the sewage entering the North Branch of the Chicago River, it is necessary to install weirs at the outlets of sewers entering the river, to measure the flow of sewage.

Your Committee further reports that it is advised that said work will be done from time to time by purchasing in the open market small quantities of timber, bolts, nails, oakum and other material, in no instance at a cost to exceed $500.00 and the labor in performing said work will be furnished by the employees of the Sanitary District on a per diem basis at a total estimated cost of $3,500.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to perform the work above specified on the basis stated, provided the cost of the same shall not exceed the sum of $3,500.00.

Respectfully submitted,

H. E. Littler,
Vice Chairman.

Jas. H. Lawley,
Matt. A. Mueller,
Patrick J. Carr,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

Chicago, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

Gentlemen—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that the recent heavy rain has caused considerable damage to the following outfalls on the North Shore Channel:

A—The outfall northwest of the Church street bridge was entirely washed out.

B—The culvert under Church street, west of the bridge has also been washed out.

C—The outfall on the northwest side of Dempster street bridge has likewise been washed out, and the north end of the west bridge abutment has been undermined and a gully about 25 feet wide cut back into the west bank of the channel at said point.

D—Also some damage has been done to ditches at Browne avenue.

As there is urgent necessity for the replacement and repair of the outfalls, ditches and banks of said channel, he requests that he be authorized to expend a sum not to exceed $10,000.00 in making the necessary replacements and repairs.

Your Committee is advised that the work will be done by the purchase of the necessary material for the concrete, no purchase at any one time to exceed the sum of $500.00, and the labor will be furnished by the employees of the Sanitary District on a per diem basis.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to perform the work above specified, on the basis stated, provided the total cost of the same shall not exceed the sum of $10,000.00.

Respectfully submitted,
H. E. Littler,
Vice Chairman.
Matt. A. Mueller,
Jas. H. Lawley,
Patrick J. Carr,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

Chicago, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Engineering reports that the Board on February 27, 1919 (page 210 of the Proceedings), authorized the Chief Engineer to prepare specifications for the repair of two large scows now used by the Sanitary District in repair work on the walls of the Main Channel.

Your Committee further reports that the Chief Engineer has prepared specifications for doing the work above stated and has presented the same to your Committee for its approval.

Your Committee further reports that it has considered said specifications, approved the same, and therefore recommends the passage of the following order:

Ordered, That the specifications prepared by the Chief Engineer for the repair of the scows above specified be, and the same are hereby, approved, and it is further

Ordered, That the Clerk be, and he is hereby, authorized to advertise for bids for the repair of said scows in accordance with the specifications so prepared by the Chief Engineer.

Respectfully submitted,
H. E. Littler,
Vice Chairman.
Jas. H. Lawley,
Matt. A. Mueller,
Patrick J. Carr,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that the customary yearly work of repairing the walls of the Main Channel should again be proceeded with.

He further states that the repairs necessary during the ensuing year will be somewhat greater than heretofore, owing to the fact that the unprecedented flood which lately came down through said Main Channel has developed numerous new weak spots in the said walls, and the Acting Chief Engineer estimates the cost of said repairs at the sum of $50,000.00.

Your Committee is advised that said work should be done by the purchase of the necessary material, consisting of ingredients of concrete, lumber and miscellaneous hardware, no purchase at any one time to exceed the sum of $500.00, and that the necessary labor to perform said work will be furnished by the regular employees of the Sanitary District.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to perform the work above specified, provided the total cost of the same shall not exceed the sum of $50,000.00.

Respectfully submitted,
H. E. LITTLER,
Vice Chairman.
MATT. A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that it is advisable to raise the east levee of the Desplaines river two feet for a distance of twelve hundred feet between Jackson street and the Atchison, Topeka & Santa Fe Railroad embankment in Joliet to prevent the flooding of said city during any period of very high water, and he estimates the cost at $5,000.00.

Your Committee is advised that it will be necessary to obtain stone and other material and a small quantity of timber in order to raise said levee. No purchase of material in excess of $500.00 will be made at any one time. The work may also require the hiring of teams, scows and tugs on a per diem basis, and the necessary labor will be performed by the regular employees of the Sanitary District.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to perform the work above specified on the basis stated, provided the total cost of the same shall not exceed the sum of $5,000.00.

Respectfully submitted,
H. E. LITTLER,
Vice Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering.

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that due to the extraordinary flood of water passing through the Desplaines River diversion a leak has developed in the northwest levee of the Desplaines River, built for the protection of adjacent and adjoining property owners at a point about 1,500 feet northwest of the Lyons-Summit Road bridge.

He further states that it is necessary to immediately repair said levee in order to prevent floods of adjoining land with consequent damages and to remove from the Desplaines River channel between Riverside and Willow Springs, brush, trees and other obstructions which may impede the flow of water through said river.

Your Committee further reports that it is advised that said repairs will be made by procuring the necessary materials in order to stop said leak by purchasing the same in the open market for a price which at no time will exceed the sum of $500.00, and the labor to perform said work will be done by the employees of the Sanitary District.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to perform the work above specified on the basis stated, provided the total cost of the same shall not exceed the sum of $5,000.00.

Respectfully submitted,

H. E. LITTLER,
Vice Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contract with the Mahon Company, a corporation, 2120 S. Kedzie avenue, wherein said company agrees to take and the Sanitary District agrees to furnish 25 K. W. of electrical energy for power purposes for the time and upon the terms and conditions therein set forth which contract has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk, be, and they are hereby, authorized and directed to execute in duplicate the attached contract, which has

heretofore been executed by said Mahon Company.

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT. A. MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote.

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, March 20, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken.

NEW APPOINTMENT.

Provided for in 1919 Budget.

Engineering Department.

Ray C. Brown, Bridge Draftsman, $200.00 per month.

REINSTATEMENTS.

Due to Honorable Discharge from the U. S. Army or Navy Service.

Engineering Department.

N. J. Gothard, Assistant Chemist, $150.00 per month.

Louis E. Legner, Instrument Man, $150.00 per month.

J. J. O'Reilly, Rodman, $115.00 per month.

Thos. J. Mooney, Rodman, $115.00 per month.

P. J. Whalen, Rodman, $115.00 per month.

TRANSFER.

Electrical Department.

P. B. Simonton, transferred from position of Lineman at $165.00 per month, to position of Lineman Foreman at $190.00 per month. Temporary.

Respectfully submitted,

GEO. W. PAULLIN,
Chairman.

MATT. A. MUELLER,
H E. LITTLER,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Passed and not voting—Mr. Sergel—One.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Lawley called up the report and order adopted and passed on February 27, 1919 (page 210 of the Proceedings), in reference to a proposed change of manufacturers of the pumps to be furnished by Nash-Dowdle Company under the terms of its contract with the Sanitary District for furnishing, delivering and erecting the building, pumping machinery, electric equipment, switchboard, conduit and wiring of the Evanston Sewage Pumping Station, and moved that the vote by which said report was adopted and said order passed be reconsidered.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Carr—One.

Mr. Lawley moved that said report and order be referred to the Committee on Engineering.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—Mr. Carr—One.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillon,
Clerk.

28.09 773
C43S

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, MARCH 27, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Absent—Messrs. Clark and Paullin—Two.

BIDS.

The Clerk opened and read the bids for printing the biennial report for 1916-1917 of The Sanitary District of Chicago to the Governor and to the two branches of the Legislature of the State of Illinois, as shown in the schedule appearing on page 286 of the Proceedings.

THE SANITARY DISTRICT OF CHICAGO.
PROPOSALS FOR PRINTING BIENNIAL REPORT FOR 1916-1917.
Bids Received March 27, 1919.

NAME	Address	Price for Printing, Binding and Delivering 500 Books of 172 Pages Each	For Extra Pages Price per Page	Remarks
John F. Higgins	Chicago	$3,000.00	$18.00	
F. J. Koch Co	Chicago	6,256.50	37.50	
The Fred. J. Ringley Co	Chicago	5,983.75	35.75	
Rogers & Hall Company	Chicago	3,415.00	4 pages, $ 47.50 8 pages, 85.00 16 pages, 160.00	Allow or add for pages more or less than 344.
Bentley, Murray & Company	Chicago	4,500.00	40.00	

RECESS.

Mr. Lawley moved that the Board take a recess for five minutes to allow the Committee on Finance to consider the bids received, at the expiration of which time the Board reconvened.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meeting of March 20, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Judiciary.

Mr. Healy presented the following report from the Committee on Judiciary.

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary reports that it has under consideration the settlement of the case of Charles H. Richards and William Lundren, surviving partners of Halvorson, Richards & Company, for the use, etc., vs. the Sanitary District, Gen. No. 258659, now pending in the Circuit Court of Cook County.

This suit was begun December 21, 1904, to recover damages aggregating the sum of $125,000.00 which said firm claims arose from the failure of the Sanitary District to perform a certain contract between Angus, Gindele & Co. and the Sanitary District dated September 19, 1904, (page 2206 of the Proceedings) for the excavation of Section "E" of the Main channel, which contract was afterwards assigned with the consent of the Sanitary District to Halvorson Richards & Co.

Your Committee further reports that said plaintiffs have agreed to accept the sum of $2,258.64 in settlement of all their claim for damages in said suit, and the Attorney for the District is of the opinion that said offer should be accepted.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to draw a warrant in the sum of $2,258.64, payable to such persons as the Circuit Court of Cook County may determine may be entitled thereto, and deliver the same to them upon receipt of a release in due form executed by them, to be approved by the Attorney, releasing and discharging the Sanitary District from all claims and demands for damages involved in said suit, and also upon receipt of a stipulation signed by said persons and by their Attorneys of record in said suit to dismiss said suit without costs to the Sanitary District.

Respectfully submitted,

WM. J. HEALY,
Chairman.

PATRICK J. CARR,
H. E. LITTLER,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, in accordance with Rule 46 of the Rules and Regulations of the Board,

herewith presents weekly reports made to your Committee by the Clerk of all purchases made by him for and on account of The Sanitary District of Chicago from December 30, 1918, to February 28, 1919, inclusive.

Your Committee further reports that it has examined said reports, found them to be correct, has approved same and recommends that they be accepted and placed on file.

Respectfully submitted,

JAMES H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and placed on file.

The motion prevailed.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports it has had under consideration the acquirement by The Sanitary District of Chicago of certain real estate, containing approximately 15,419.68 square feet, located on the east side of the Chicago river, near 16th street, Chicago, known as Tracts 163, 164, 165, 166 and 167, which is now owned by the Chicago, Rock Island and Pacific Railway and the New York Central Railroad Company, and which property is now involved in the condemnation proceeding now pending in the Circuit Court of Cook County, Illinois, known as Gen. No. 217030, instituted by the Sanitary District and to which suit said railroad companies are parties defendant.

Since the institution of said condemnation suit numerous attempts have been made to adjust and compromise the same so that the Sanitary District might acquire said real estate by the payment of a fair and reasonable price therefor, and thereby avoid the expense of a trial of the issues involved in said suit. During the year 1918 Wiliam A. Bond, a real estate expert of the highest standing, was employed by the Board to place a valuation on said real estate, and his report, which is herewith transmitted, fixed the value of said real estate at the sum of $4.75 per square foot, which valuation, after numerous conferences, has been finally accepted by said railroad companies as fair and reasonable, and is the basis of the settlement hereinafter outlined.

An opinion of the Chicago Title & Trust Company as to the title of said real estate shows that there are several trust deeds of record covering said real estate given to secure a number of bond issues. After conferences between the attorneys for the Sanitary District, officials of the Chicago Title & Trust Company and the attorneys for said railroads, the Chicago Title & Trust Company offered to issue a guaranty policy to the Sanitary District guaranteeing the title to said real estate in the Sanitary District, upon said railroads executing a quitclaim deed conveying said real estate to the Sanitary District, and upon said railroad companies executing and delivering a letter to the Chicago Title & Trust Company, wherein they agree to furnish to the Chicago Title & Trust Company releases of all outstanding trust deeds from the Trustees named therein, within one year from the date of said letter; and upon judgment being entered in said condemnation suit fixing the just compensation to be paid for said real estate at the sum of $73,243.48, calculated on the basis of a valuation of $4.75 per square foot.

Your Committee further reports that said railroad companies have agreed, if this proposed settlement is approved by the Sanitary District, to incorporate in said quitclaim deed a clause releasing and waiving all damages and all claims

for damages to the remaining property of the grantors, or either of them, adjoining or adjacent to said real estate so to be conveyed, that may be caused by reason of the taking of said real estate by the district, and by reason of any excavation by the Sanitary District in or upon the real estate aforesaid to be conveyed for the purpose of widening and deepening the South Branch of the Chicago river; provided that the Sanitary District will give to said railroads a letter assuring the latter that when they or either of them shall hereafter desire to construct a dock upon and along that portion of the property of said railroads contiguous to the Chicago river, and lying along the present easterly line of the real estate to be conveyed to the Sanitary District, then, so far as it has any jurisdiction over the subject matter, the Sanitary District will not at such time require the said railroad companies, or either of them, to build any other or more expensive type of dock than that described in the present dock specifications used by the Sanitary District, being the standard dock specifications for use along the South Branch of the Chicago river.

Your Committee further reports that the total expense of procuring the necessary opinions of title and said guaranty policy will be the sum of $810.00, which expense is to be borne by the Sanitary District as a part of this settlement.

Your Committee further reports that the proposed settlement has been approved by the Chief Engineer as to the engineering questions involved, and the attorney has recommended that said real estate be acquired on the basis of $4.75 per square foot, and he approves the method and procedure of settlement as stated.

Your Committee, after considering the entire subject matter, is of the opinion that it is advantageous to the Sanitary District to settle said condemnation suit and acquire said tracts of real estate for the consideration stated in the manner set forth, and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to draw a warrant in the sum of $73,243.48, payable to the Chicago Title & Trust Company, and deliver the same to said company, to be delivered by said company to the Chicago, Rock Island & Pacific Railway Company and the New York Central Railroad Company, the owners of said tracts of real estate, upon the delivery to the Sanitary District of a quitclaim deed from said railroad companies, conveying to the Sanitary District all right, title and interest which said railroad companies have in and to the real estate located on the east bank of the South Branch of the Chicago river near 16th street, and known as Tracts 163, 164, 165, 166 and 167, containing approximately 15,419.68 square feet, which deed shall contain a clause releasing and waiving all damages and all claims for damages to the remaining property of said railroad companies, or either of them, adjoining or adjacent to said real estate to be conveyed as aforesaid, that may be caused by reason of the taking of said property by the District, and by reason of any excavation by the Sanitary District in or upon the land to be conveyed to it for the purpose of widening and deepening the South Branch of the Chicago river; and, further, upon the Chicago Title & Trust Company furnishing and delivering to the Sanitary District its guaranty policy, guaranteeing the title to said tracts of land in fee simple in the Sanitary District; provided, that if for any reason said settlement is not consummated and said deed and guaranty policy are not delivered as aforesaid within thirty days from the date of delivery of said warrant to the Chicago Title & Trust Company, then said warrant, after being properly en-

dorsed, shall be returned by the Chicago Title & Trust Company to the Sanitary District; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk, be, and they are hereby, authorized and directed when said settlement is fully consummated to draw a warrant in the sum of $810.00, payable to the Chicago Title & Trust Company, and deliver the same to said company in full payment of its charges for furnishing and delivering the necessary opinions of title and guaranty policy above specified; and it is further

Ordered, That the Chief Engineer of the Sanitary District be, and he is hereby, authorized to sign and deliver to said railroad companies on behalf of the Sanitary District a letter agreeing that when the said railroad companies, or either of them, desire to construct a dock upon and along that portion of the property of said railroad companies contiguous to the Chicago river and lying along the present easterly line of the property to be conveyed as aforesaid to the Sanitary District, then, so far as the Sanitary District has any jurisdiction in connection with the subject matter, it will not at such time require the railroad companies, or either of them, to build any other or more expensive type of dock than that described in the present dock specifications used by the Sanitary District, being the standard dock specifications for use in the South Branch of the Chicago river; and it is further

Ordered, That the Attorney of the District be, and he is hereby, given leave to waive a jury in said condemnation suit and submit the same to the Court without a jury.

Respectfully submitted,

JAMES H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller and Nance—Six.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 27, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of March payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of March, 1919.

John McGillen, Clerk (general payrolls)		$ 27,239.09

Construction Account.

Jas. O. Heyworth (labor for operating plant)	$ 2,000.00	
Jas. O. Heyworth (labor for operating pumping plant)	550.00	
Jas. O. Heyworth (labor for operating pumping plant)	475.00	
John F. Klein (teaming)	66.00	
Chicago Telephone Company (telephone service)	32.70	
McCallum & Clark (rent)	25.00	
Orrin Eames (rent)	20.00	
H. Channon Company (material and tools)	15.90	
Amounts carried forward	$ 3,184.60	$ 27,239.09

Amounts brought forward	$ 3,184.60	$ 27,239.09
United States Rubber Company (three pair boots)	15.60	
Kueffel & Esser Company (tape and plumb bobs)	12.83	
Chicago Towel Company (towel service)	10.50	
Chas. E. Arnold Company (tools)	2.40	
Josephine Eck (rent)	8.00	
Kueffel & Esser Company (steel tape)	3.20	
Mead & Wheeler (globe punch)	1.90	
Public Service Company of Northern Illinois (gas service)	1.35	
Public Service Company of Northern Illinois (gas service)	.50	
Chicago Towel Company (towel service)	2.50	
Nelson Bros. Laundry (towel service)	1.00	
Commonwealth Edison Company (electrical energy)	.50	
		3,244.88

Maintenance and Operation Account.

John McGillen, Clerk (freight charges paid to I. C. R. R. for fuel to 39th St.)	$ 167.96	
John McGillen, Clerk (freight charges paid to I. C. R. R. for fuel to 39th St.)	86.34	
John McGillen, Clerk (freight charges paid to I. C. R. R. for fuel to 39th St.)	82.15	
John McGillen, Clerk (expenses of employe)	4.33	
Kueffel & Esser Company (supplies)	183.20	
Burr-Vack Company (pencils, etc.)	145.55	
Burr-Vack Company (memo books)	19.20	
Burr-Vack Company (memo books)	19.20	
Burr-Vack Company (supplies)	13.70	
Burr-Vack Company (modern loose leaf covers)	5.60	
Burr-Vack Company (keys for Underwood machine)	3.50	
Kenwood Trucking & Teaming Company (removing cinders at 39th St.)	136.00	
Worthington Pump & Machinery Corporation (repairs at Lawrence Ave.)	113.80	
Thornton-Claney Lumber Company (lumber)	96.34	
Wilbur J. Connell (tools)	68.56	
Power Coal Company (freight on fuel to Lawrence Ave.)	62.67	
Geo. B. Carpenter & Co. (blocks and rope)	61.76	
American Supply Company (white waste)	56.00	
Buckley & Buckley (supplies)	45.30	
Green Engineering Company (rear drums, etc.)	46.25	
Sweet, Wallach & Co. (supplies)	37.70	
Allis-Chalmers Mfg. Company (rocker arm and pin)	36.94	
John McGillen, Clerk (special roll, repairs to Desplaines river levee at Summit)	181.90	
John McGillen, Clerk (special roll, 39th St. Pumping Station)	154.00	
North Shore Ash Company (hauling ashes)	324.00	
Theo. B. Robertson Products Company, Inc. (soap powder)	40.84	
Chicago Fire Brick Company (fire bricks)	36.46	
Bentley, Murray & Co. (ruled forms)	32.50	
Stebbins Hardware Company (wire nails, etc.)	30.14	
Kirby Motor Trucking Company (cartage)	29.96	
Worthington Pump & Machinery Corporation (brass valves, etc.)	27.00	
Green Engineering Company (beam clips)	25.47	
Geo. L. Hammons, Inc. (jet pumps, etc.)	24.51	
Crane Company (gate valve repaired)	25.00	
Wadsworth-Howland Company (material)	18.86	
United States Rubber Company (boots and rubber coats)	18.26	
O. M. Bales (sampling cans)	15.00	
Geo. L. Hammons, Inc. (packing and gauge glass gaskets)	13.75	
Amounts carried forward	$ 2,471.44	$ 30,483.97

Amounts brought forward	$ 2,471.44	$ 30,483.97
Geo. L. Hammons, Inc. (hand lubricating pump)	8.75	
Geo. L. Hammons, Inc. (packing)	4.20	
Old Glory Mfg. Company (one flag)	10.50	
Jos. T. Ryerson & Son (beam)	9.69	
Weil Bros. (pipe fittings)	7.97	
Munson Supply Company (two sets rubber keys)	7.00	
H. W. Johns-Manville Company (ball and orifice for trap)	6.86	
Edge Moor Iron Company (repairs)	6.03	
Parker's Towel Supply Company (towel service)	5.00	
L. Gould & Co. (toilet paper)	4.72	
Scully Steel & Iron Company (channel)	2.69	
Ed. M. Howard (one set generator brushes)	2.80	
Public Service Company of Northern Illinois (power service)	1.50	
Peoples Gas Light & Coke Company (gas)	.65	
Peoples Gas Light & Coke Company (gas service)	.65	
Bissell Laundry (towel service)	1.20	
		2,569.91

General Account.

Commonwealth Edison Company (two Emeralite lamps)		24.00

Illinois & Michigan Canal and Illinois River Conditions Department.

Consumers Company (coal)	$ 412.31	
H. & E. F. Hunter (coal)	89.80	
W. H. Ratcliff (teaming)	34.50	
E. H. Heilbron (expenses of employes)	28.20	
Hotel Atlantic (expenses of Heilbron and Dugan)	7.75	
Chillicothe Hardware Company (friction tape, etc.)	4.51	
		577.07

Law Department.

Coll McNaghton (legal services)	$ 3,658.75	
Underwood Typewriter Company (one Underwood typewriter)	92.25	
Underwood Typewriter Company (adjusting machine)	5.00	
Callaghan & Co. (Federal Statutes, etc.)	14.12	
Callaghan & Co. (United States Supreme Court Reports, etc.)	10.50	
Burr-Vack Company (memo books, etc.)	14.00	
Chicago Law Institute (annual assessment)	14.00	
The Peoples Abstract Company (information in re conveyance of lots—Edgewater, Joliet, Illinois, re case of P. R. Bannon vs. the Sanitary District)	10.00	
The Frank Shepard Company (subscription)	7.00	
Geo. I. Jones (American and English annotated cases)	5.00	
West Publishing Company (subscription)	4.00	
		3,834.62

Real Estate Department.

John F. Hesterman (taxes on land in DuPage County)	$ 260.77	
Joseph F. Haas (rental of lock box, Recorder's office)	3.00	
		263.77

Police Department.

John McGillen, Clerk (expenses of employes)		27.30

Electrical Department.

John McGillen, Clerk (regular payroll, last half of March)	$ 16,324.52	
John McGillen, Clerk (one 25-ride ticket to Joliet)	15.44	
John McGillen, Clerk (state license)	6.00	
Amounts carried forward	$ 16,345.96	$ 36,780.64

Amounts brought forward	$ 16,345.96	$ 36,780.64
John McGillen, Clerk (expenses of employe)	7.15	
John McGillen, Clerk (water taxes)	4.23	
Commonwealth Edison Company (circuit breaker and current transformers)	363.96	
Norris-Ward Coal Company (egg coal)	494.24	
Norris-Ward Coal Company (egg coal)	79.06	
Commonwealth Edison Company (demand indicators, etc.)	169.58	
Commonwealth Edison Company (overload relays)	105.00	
Commonwealth Edison Company (Greenfield couplings, etc.)	12.97	
National Lead Company (solder, etc.)	338.26	
John Naghten & Co. (insurance)	207.90	
John Naghten & Co. (insurance)	.75	
Monarch Electric & Wire Company (coils)	171.50	
O. Frenzel (teaming)	131.84	
Wm. Heggie (gate cap screws, etc.)	121.80	
The Texas Company (kerosene and gasoline)	106.90	
Crocker-Wheeler Company (battery brushes with braid)	95.00	
Wilbur J. Connell (long handle shovels, etc.)	89.32	
Wilbur J. Connell (bastard files, etc.)	29.03	
Bentley, Murray Company (books, etc.)	88.25	
Western Electric Company (copper lugs, etc.)	87.72	
Geo. B. Carpenter & Co. (five coils jute rope)	86.77	
R. Hanisch Sons Company (duck cover, etc.)	81.28	
Belden Mfg. Company (wire, etc.)	71.75	
General Electric Company (wood screws, etc.)	66.50	
Westinghouse Electric & Mfg. Company (cycle counter)	60.00	
Bentley-Murray Company (printing)	44.75	
Illinois Testing Laboratories (repairing and changing one megger, etc.)	39.00	
Burr-Vack Company (journal paper, etc.)	29.90	
G. Johnson (teaming)	27.00	
Aldine Press (printing)	22.60	
David G. Murray (teaming)	16.00	
National Fibre & Insulation Company (black fibre, etc.)	15.24	
H. M. Hooker Glass & Paint Company (banana oil)	13.85	
A. C. Miller (gasoline)	12.65	
John Bigane & Sons (chestnut coal)	12.05	
Windle Garage (garage rental auto No. 492)	12.00	
Windle Garage (garage rental auto No. 492)	12.00	
Chicago Daily Journal (advertising)	11.55	
Buchanan-Daley Company (lumber)	10.56	
Auto Radiator Mfg. Company (radiator repaired)	8.82	
Geo. L. Hammons, Inc. (cap screws, etc.)	8.16	
The C. H. Hanson Company (stencil figs., etc.)	4.69	
Vesta Accumulator Company (charges for recharging battery)	.50	
		19,718.04

Miscellaneous Accounts.

John McGillen, Clerk (special roll 39th St. Pumping Station)—			
Electrical Department	$ 96.00		
Maintenance and Operation Account	134.71		
		$ 230.71	
John McGillen, Clerk (expenses of employe)—			
Maintenance and Operation Account	$ 1.65		
Clerical Department	8.40		
Electrical Department	6.55		
		16.60	
Amounts carried forward		$ 247.31	$ 56,498.68

Amounts brought forward		$ 247.31	$ 56,498.68
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 101.78		
Maintenance and Operation Account	9.80		
Real Estate Department	23.92		
Law Department	.41		
General Account	2.73		
		138.64	
C. Arch Williams, Attorney (cash box account Law Department)—			
Construction Account	$ .50		
Law Department	83.75		
		84.25	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 76.77		
Maintenance and Operation Account	.80		
General Account	2.09		
Electrical Department	1.87		
		81.53	
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 5.30		
Law Department	4.50		
Police Department	.10		
General Account	188.76		
Electrical Department	4.70		
		203.36	
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 6.35		
Law Department	3.50		
Clerical Department	1.80		
Police Department	.40		
General Account	191.01		
Electrical Department	31.16		
		234.22	
			989.31
Grand Total			$ 58,487.99

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that Section 1 of the Act of the Legislature of the State of Illinois, under which The Sanitary District of Chicago is organized, provides that the Board of Trustees shall on November 30, 1906, and biennially there-

after, report to the Governor of the State of Illinois and to the two branches of the Legislature thereof, all items of moneys received from all sources and payments made therefrom, and it is necessary that 500 copies of said report be printed for the use above stated and for general distribution.

Your Committee further reports that it has received and canvassed competitive bids for doing said work, which were this day referred to your committee, and finds that the lowest bid received was that of John F. Higgins, in the sum of $3,000.00 for printing said report as specified, it being understood that the 172 pages composing said book are double pages and that the sum of $18.00 is to be added for each additional double page of said report over 172 double pages.

Your Committee, having considered the matter, is of the opinion that said bid should be accepted on the terms proposed, and therefore recommends the passage of the following order:

Ordered, That the bid of John F. Higgins, on the basis above stated, be, and the same is hereby, accepted, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago is hereby authorized to approve the bond given by John F. Higgins for the faithful performance of said work; and it is further

Ordered, That the form of said agreement and bond be printed in the Proceedings of the Board.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT A MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Engineering.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago

GENTLEMEN—Your Committee on Engineering reports that the Chief Engineer has prepared plans and specifications for a portion of the work of constructing the Desplaines river sewage treatment works and for certain equipment to be furnished therefor, and has presented the same to your Committee for approval.

Your Committee further reports that it has considered said plans and specifications and approved the same, and therefore recommends the passage of the following order.

Ordered, That the plans and specifications prepared by the Chief Engineer for the work above specified be, and the same are hereby, approved; and it is further

Ordered, That the Clerk be, and he is hereby, authorized and directed to advertise for bids for the performance of the work above specified in accordance with the plans and specifications so prepared by the Chief Engineer.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, March 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which was referred at the meeting of March 20, 1919, page 262 of the Proceedings, bids for furnishing and delivering 60,000 feet of 12,000 volt 3 conductor lead covered cable and 2,000 feet of 5,000 volt 4 conductor lead covered cable, having considered all of the proposals presented and the qualification of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the General Electric Company.

Your Committee further reports that it is of the opinion that said company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing and delivering said cable, and having had the matter under consideration, recommends the passage of hte following order:

Ordered, That the contract for furnishing and delivering said cable be and the same is hereby, awarded to the General Electric Company for the sum stated in the schedule of its bid for each lineal foot of cable of the sizes mentioned therein, being $1.59 per foot for said 12,000 volt 3 conductor lead covered cable and $1.09 per foot for each foot of 5,000 volt 4 conductor lead covered cable, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and Clerk be, and they are hereby, authorized and directed to execute in duplicate the said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by the said General Electric Company and a bond for the faithful performance of said contract shall have been furnished to and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, March 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that the excavation for the foundation of the Evanston Pumping Station has reached the elevation shown by the plans; that the underlying material on the west side of the station is not suitable on which to rest the foundation for said station and there is danger of an uneven settle-

ment unless the base of the foundation is increased, which will necessitate additional excavation and the placing of additional concrete. He further states that the contract provides, in the event unsatisfactory material is encountered at the designated elevation, that the contractor shall perform such additional work under the unit prices specified in the contract, and estimates that the additional work necessary to prepare a proper base for said foundation will cost approximately $7,500.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to order Nash-Dowdle Company, contractor for the construction of said station, to do the necessary work above specified at the unit prices specified in said contract, provided the cost thereof shall not exceed the sum of $7,500.00.

Respectfully submitted,
H. E. Littler,
Vice-Chairman.
Matt. A. Mueller.
Jas. H. Lawley,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller and Nance—Six.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

Chicago, March 27, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Electrical Development reports that in the year 1918, the Sanitary District entered into a contract with the Dryden Rubber Company to supply said Company with electrical energy at certain rates, provided said Company did not consume said electricity during the peak period.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he states that the Company violated the terms of its contract and used electricity during the peak period in the belief that the terms of the contract in this respect would not be enforced; that said Company was charged the sum of $764.52 in excess of the original charge by reason of the fact that the Company had consumed electricity during such period and said Company has requested that it be relieved from the payment of said excess charges under the circumstances and the Electrical Engineer recommends that an allowance be made, which would amount to the difference between the bills as rendered and the charge that would have resulted if the old contract with the Company had been continued in force, namely $334.43.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby, authorized and directed to allow the Dryden Rubber Company the sum of $334.43 for the reasons above stated.

Respectfully submitted,
H. E. Littler,
Chairman.
Wm. J. Healy,
Matt A Mueller,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler and Mueller—Five.

Nays—Messrs. Sergel and Nance—Two.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contract with Pronger Brothers, 380 Western avenue, with the American Wrench Specialties Company, 297 New street, both located in Blue Island, Ill., and with the Great Western Smelting & Refining Company, 4100 Wallace street, Chicago, the latter contract being a renewal, wherein they agree to take and the Sanitary District agrees to furnish electrical energy for the periods and upon the terms and conditions therein set forth. Said contracts have been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contracts, which have been properly executed by Pronger Brothers, the American Wrench Specialties Company and the Great Western Smelting & Refining Company.

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT A MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Employment.

Mr. Lawley presented the following report from the Committee on Employment:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

New Appointments—Provided for in 1919 Budget:

Electrical Department—

A. J. Peck, Cable Splicer (temporary), 87½c per hour.

William Kamberg, Material and Tool Clerk, $125.00 mo.

Engineering Department—

C. M. Hopfer, Laborer, 45c per hour.
Julius Berman, Laborer, 45c per hour.
Angelo Camero, Laborer, 45c per hour.

Reinstatement—Due to honorable discharge from the U. S. Army Service:

Clerk's Division—

James J. Kropacek, Stenographer and Index Clerk, $140.00 mo.

Respectfully submitted,

JAS. H. LAWLEY,
Acting Chairman.

H. E. LITTLER,
MATT. A. MUELLER,
Committee on Employment.

Mr. Lawley moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy,

Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Illinois Valley.

Mr. Mueller presented the following report from the Committee on Illinois Valley:

CHICAGO, March 27, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Illinois Valley reports that on January 31, 1901, Patrick R. Bannon brought suit in the sum of Forty Thousand ($40,000.00) Dollars, against The Sanitary District of Chicago in the Circuit Court of Will County, Illinois, to recover damages to about twenty-four (24) acres of land situated in said county, by reason of overflow caused by turning the water into the Main Channel of the Sanitary District. Such land being known as Edgewater, and being situated just north of the city limits of Joliet, on the west bank of the Des Plaines river opposite the Illinois Steel Company's plant.

Your Committee further reports that it has been negotiating with Mr. E. Meers, the attorney for said plaintiff, for a settlement of said suit and that the said plaintiff, together with a number of witnesses appeared before this Committee, and that it has reached an agreement with the said plaintiff and his attorney that the said suit may be settled for the sum of Twelve Thousand Five Hundred ($12,500.00) Dollars, such amount to include all damages caused by the construction and use of the works of the Sanitary District.

Your Committee is of the opinion that the above is a fair and reasonable settlement and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be and they are hereby authorized and directed to draw a warrant in the sum of Twelve Thousand Five Hundred ($12,500.00) Dollars, payable to Patrick R. Bannon, and to deliver the same to him upon the execution and delivery by him of a release satisfactory to the Attorney of the Sanitary District, dismissing the said suit without costs, including Attorney's fees, and releasing the Sanitary District from all past, present and future damage to the land described in the declaration filed in the said suit.

Respectfully submitted,

MATT. A. MUELLER,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
WILLIS O. NANCE,
Committee on Illinois Valley.

Mr. Mueller moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Healy, Lawley, Littler, Mueller and Nance—Six.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from the Evanston Railway Company in which it asked permission to do landscape work on the property of the Sanitary District adjacent to its car station in Evanston.

Referred to the Committee on North Shore Channel.

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

628.09773
C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, APRIL 3, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:
Present—Messrs. Sergel, Carr, Healy, Nance and Paullin—Five.
Absent—Messrs. Clark, Lawley, Littler and Mueller—Four.

BIDS.

The Clerk opened and read the bids received for repairing scows, as shown in the schedule appearing on page 301-A of the Proceedings.

Mr. Carr moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

ADJOURNMENT.

Mr. Carr moved that the Board adjourn.

The motion prevailed.

John W. Gillen, Clerk

In Order Received	In Order of Magnitude		Furnishing Shop Machine Tools	Furnishing Air or Electric Power Hand Tools	Furnishing Blacksmith and Forge	Furnishing Material
1		Kr Abe	$1.25 per hr. the work.	$0.75 per hr.	Regular Commercial Rate	Cost Plus 10%

THE SANITARY DISTRICT OF CHICAGO
PROPOSALS FOR REPAIRING SCOWS
Bids Received April 3, 1919.

In Order Received	In Order of Magnitude	NAME OF BIDDER	Address	Placing in Dry Dock or Hauling on Bank		Repair Work Labor and Material Plus Per Cent	Placing in Dry Dock	Labor	Supervision	Furnishing Shop Machine Tools	Furnishing Air or Electric Power Hand Tools	Furnishing Blacksmith and Forge	Furnishing Material
				Scow No. 1 Lump Sum	Scow No. 2 Lump Sum	Both Scows							
1		Kraft Shipyard & Dry Dock Co.	Chicago	Neither Bid is vided in propo	in form pro-sal.	Actual Cost plus %	$35.00 Minimum	Cost Plus 25c per hr.	$1.25 per hr.	$1.25 per hr.	$0.75 per hr.	Regular Commercial Rate	Cost Plus 10%
						Actual Cost plus %	50c per ft. Maximum						
						Actual Cost plus %	$8.00 per lay day						
		Abraham Burrell	Chicago			Actual Cost plus %	Will do work by time and material. Can't estimate the work.						

28,05773
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JUN 6 - 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, APRIL 10, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meetings of March 27 and April 3, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented his report of money received and money deposited with the Treasurer during the month of March, 1919, which was ordered published and filed as follows:

CHICAGO, April 10, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of eighty thousand, ninety-four and ninety-nine one-hundredths ($80,094.99) dollars, during the month of March, 1919, from the following sources:

Great Lakes Dredge & Dock Company, in payment of our bills of March 30th and December 31st, 1917, and January 30th and November 30th, 1918		$ 7,436.18
Fred C. Bauman, Collector, Town of Niles, account 1918 taxes		3,302.29
Atchison, Topeka & Santa Fe Railroad Company, in payment of semi-annual rental from July 1, 1918, to December 31st, 1918, for water service at Corwith, Willow Springs and Joliet, Ill.		1,570.00
Great Lakes Dredge & Dock Company, in payment of our bill of November 30, 1918, against the Western Quarries Company, for 13380.4 cubic yards of stone at .10½c		1,404.94
Frank Phillips, Collector, Town of Norwood Park, account 1918 taxes		934.73
United States Crushed Stone Company, in payment of judgment note due March 1, 1918		333.33
Van Fleet Shops, being rental for months of April and May, 1918		150.00
Sundry consumers, for electric power and light	$ 51,649.15	
South Park Commissioners, for power and light for the month of February, 1919	3,695.63	
Village of Forest Park—		
For power and light for months of July, August September and October, 1918	$1,962.68	
Interest and depreciation for September, 1918	130.95	
	2,093.63	
Commissioners of Lincoln Park—		
For power and light for January, 1919	$1,277.32	
Interest and depreciation for January, 1919	69.45	
	1,346.77	
West Chicago Park Commissioners—		
For power and light for January, 1919	$1,196.31	
Interest and depreciation for January, 1919	112.14	
	1,308.45	
Village of Maywood—		
For power and light for January, 1919	$1,040.96	
Interest and depreciation for January, 1919	89.30	
	1,130.26	
State of Illinois, for month of January, 1919	980.48	
Village of Dolton—		
For power and light for January, 1919	$ 768.67	
Interest and depreciation for January, 1919	18.65	
	787.32	
Village of Evergreen Park—		
For power and light for January and February, 1919	$ 468.38	
Amount carried forward		$ 15,131.47

Amount brought forward			$ 15,131.47
Interest and depreciation for January and February, 1919	53.74		
		522.12	
Town of Cicero, for power and light for January, 1919		499.80	
Village of Summit—			
For power and light for January, 1919	$ 316.79		
Interest and depreciation for January, 1919	32.98		
		349.77	
City of Berwyn—			
For power and light for February, 1919	$ 124.97		
Interest and depreciation for February, 1919	15.00		
		139.97	
Village of Wilmette, for power and light for January, 1919		126.90	
Village of Lyons, for power and light for January and February, 1919		88.38	
Village of Stickney, for power and light for January and February, 1919		32.19	
Village of Blue Island, for power and light for December, 1918, and January, 1919		17.06	
Wilmette Park District, interest and depreciation for January and February, 1919		10.00	
Sundry power consumers, rental of meters for February, 1919		124.00	
J. L. Hawley, to cover first payment received from F. Westerberg, to apply against the account of $62.50 due the Sanitary District		16.00	
Chicago Surface Lines, amount received for cost of repairs to automobile		14.38	
Jas. J. Finneran, account personal telephone calls		7.90	
Conklin, Price & Webb, refund of insurance		7.12	
R. W. Faupel, account personal telephone calls		5.55	
Mrs. F. P. Poole—			
Installation service	$ 1.50		
Old electric light account	2.96		
		4.46	
Isabelle Ward, account personal telephone calls		3.03	
P. R. Mott, installation of service		1.50	
J. W. Luce, installation of service		1.50	
J. L. Hawley, account personal telephone calls		.20	
			64,963.52
Grand Total			$ 80,094.99

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by the attached receipt.

Respectfully submitted,

JOHN MCGILLEN,
Clerk.

CHICAGO, April 10, 1919.

$80,094.99.

Received of John McGillen, Clerk, the sum of eighty thousand, ninety-four and ninety-nine one-hundredths ($80,094.99) dollars, on the dates and in amounts as follows:

March 1	$ 1,145.42
March 3	670.08
March 4	333.73
March 6	364.92
March 7	463.58
March 8	2,154.52
March 10	108.24
March 12	2,292.55
March 13	2,202.50
March 14	3,221.46
March 15	2,499.70
March 17	1,838.36
March 18	5,425.58
March 19	11,514.55
March 20	11,019.90
March 21	8,862.00
March 22	2,620.48
March 24	458.54
March 25	632.37
March 26	2,697.86
March 27	4,092.64
March 28	10,064.30
March 29	731.72
March 31	4,679.99
Total	$ 80,094.99

To be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

Electrical Department (working capital)	$ 64,963.52
Great Lakes Dredge & Dock Company	7,436.18
Collector, Town of Niles	3,302.29
Water service	1,570.00
Western Quarries Company	1,404.94
Collector, Town of Norwood Park	934.73
Bills Receivable (United States Crushed Stone Company)	333.33
Land Revenue	150.00
Total	$ 80,094.99

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Electrical Engineer in which he states that at the present time the Sanitary District has one Nelson-Le Moon two ton truck, one White three-ton truck and two International one-ton trucks which are constantly in use. He further states that the needs of his department require a five-ton truck which can carry heavy

transformers and other equipment, and he recommends that such a truck be purchased at an estimated cost of $5,500.00.

Your Committee having considered the matter is of the opinion that such a truck should be purchased and therefore recommends the passage of the following order:

Ordered, That the Attorney prepare a form of advertisement for bids for the purchase by the Sanitary District of the truck above specified and that the Clerk advertise for bids therefor.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Chief Engineer in which he states that it is necessary to purchase miscellaneous bolts, washers and spikes to be used by employees of the Sanitary District in constructing temporary supports for the tracks of the Grand Trunk Western Railway Company across and adjacent to the Calumet-Sag Channel in the City of Blue Island until the new through plate girder bridge to be built by the Sanitary District for said company is completed, at an estimated cost of $500.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to purchase in the open market for the best price obtainable, the bolts, washers and spikes above specified, provided that the cost of the same shall not exceed the sum of $500.00.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a request from the Marshal to make a transfer of funds from one unexpended account to another account which was not appropriated for in the appropriation bill for 1919, the amount of said fund so transferred to be expended in the keeping, care and cleaning of motor vehicles.

Your Committee, having considered said request, is of the opinion that same should be granted, and therefore recom-

mends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make a transfer in the appropriation of the Department of Police of $360.00 from account 8-99 "Contingencies" to account 8-262 "Keeping, Care and Cleaning of Motor Vehicles."

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board a grant of easement from the Aurora, Elgin & Chicago Railroad Company, whereby said Company for the nominal consideration of $1.00 grants to the Sanitary District a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer and appurtenances thereto in the Desplaines River district, in, under and through certain real estate owned by said Railroad Company. Said easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate said form of easement, which is hereto attached, the same having been duly executed by said Railroad Company.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that on February 13, 1919, (page 165 of the Proceedings) the Board authorized the Chief Engineer to prepare specifications for the purchase of coal to supply the 39th street and Lawrence avenue pumping stations for ninety days from April 1, 1919, on the British thermal unit basis, and directed the Clerk to advertise for bids therefor in accordance with the specifications so prepared by the Chief Engineer.

Your Committee further reports that it has received another communication from the Chief Engineer in which he

states that there is sufficient coal on hand at the 39th Street Pumping Station to supply its needs until May 21, 1919, but that approximately 14,000 additional tons will be needed to operate the station for the balance of the year, and that at the Lawrence Avenue Pumping Station there is approximately 500 tons on hand or in transit to supply its needs until May 14, 1919, but that 3,500 additional tons will be needed to operate the station for the balance of the year.

Your Committee, having considered the matter, is of the opinion that contracts should be entered into to supply said stations with coal for a period of one year from May 1, 1919, and therefore recommends the passage of the following order:

Ordered, That the order passed by the Board on February 13, 1919, above referred to, which limits the supply of coal to be purchased to a period of ninety days be, and the same is hereby, repealed, and it is further

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to prepare specifications for the purchase of coal to supply the 39th Street and Lawrence Avenue Pumping Stations for a period of one year from May 1, 1919, on the British thermal unit basis, and that the Clerk advertise for bids therefor in accordance with the specifications to be prepared by the Chief Engineer.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report as Chairman of the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—On March 27th, 1919, (page 295 of the Proceedings) the Board accepted the bid of John F. Higgins to print the biennial report of the Sanitary District of Chicago to the Governor of the State of Illinois, and to the two branches of the Legislature, for the sum of $3,000.00, for 172 double pages, and $18.00 for each additional double page, and authorized the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District to approve the bond given by said John F. Higgins for the faithful performance of the work.

The Chairman of said Committee reports that he examined and approved the bond of said John F. Higgins in the penal sum of $2,000.00 with the Hartford Accident & Indemnity Company thereon as surety for the faithful performance of the contract for doing said work and herewith transmits said contract and bond for publication in the Proceedings of the Board.

Respectfully submitted

JAS. H. LAWLEY,
Chairman, Committee on Finance.

Mr. Lawley moved that the report be adopted and that the contract and bond of John F. Higgins be printed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond of John D. Higgins:

CHICAGO, March 27, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—The undersigned hereby offers to print and bind five hundred (500) books, being the biennial report of The Sanitary District of Chicago to the Governor and the two branches of the State Legislature of the State of Illinois for the years 1916 and 1917; said books to be fourteen (14) inches by eleven (11) inches in size and printed on paper to be approved by the Clerk of The Sanitary District of Chicago. Said work of printing shall follow sample, and said offer is made on the following terms and conditions:

(1) Four (4) copies of said book are to be bound with cloth sides, leather backs and corners, and the balance of said books are to be bound with paper and cloth backs as per sample on file in the office of the Clerk of The Sanitary District of Chicago, Room 700, 910 South Michigan avenue, Chicago, Illinois.

(2) Said work is to be entirely completed and all of said books are to be delivered to the Clerk of said The Sanitary District of Chicago on or before the 10th day of May, 1919.

(3) The undersigned will furnish a bond in the sum of Two Thousand ($2,000.00) Dollars for the faithful performance of said work with sureties thereon to be approved by the Board of Trustees of The Sanitary District of Chicago.

(4) The undersigned will save and keep harmless The Sanitary District of Chicago from any and all claims for compensation for personal injuries suffered by any of his employees, and will pay such compensation and other legal charges to such employees or their beneficiaries as is provided for in the Acts of the General Assembly of the State of Illinois relating to Workmen's Compensation.

(5) The price to be paid for printing, binding and delivering said five hundred (500) books is the sum of $3,000.00.

(6) If the number of double pages contained in said report is more than one hundred seventy-two (172) then the undersigned agrees to print and furnish extra double pages to be included in said report for the sum of $18.00 for each double page.

(7) The undersigned also agrees to furnish to the Clerk of The Sanitary District of Chicago two (2) broad margin galley proofs of each page of said report as the work progresses, one of which shall be returned with the corrections thereon to the undersigned, and the undersigned will then furnish to said Clerk two (2) broad margin galley corrected proofs of each page of said report.

(8) It is understood that the manuscript for the first year of said report will be ready for delivery to the undersigned on the 27th day of March, 1919, at 10:00 A. M., and the manuscript for the second year of said report will be ready for delivery to the undersigned within twenty (20) days thereafter.

(9) It is understood that the undersigned will furnish said Clerk of The Sanitary District of Chicago all proofs required by this proposal within a reasonable time after receiving said manuscript, and said The Sanitary District of Chicago agrees on its part to use due diligence in correcting said proofs as soon as is practicable after the receipt of the same; it being understood that the undersigned will deliver to said The Sanitary District of Chicago the galley proofs of said work from day to day, as the composition for said work is made up.

(10) The above bid is made with the distinct understanding that no compensation will be made for any corrections

in the composition of said work by the undersigned.

Respectfully submitted,
JOHN F. HIGGINS,
376 W. Monroe St.

Accepted:
JAS. H. LAWLEY,
Chairman, Committee on Finance, The Sanitary District of Chicago.

BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, John F. Higgins, as principal, and Hartford Accident and Indemnity Company, as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Two Thousand ($2,000.00) Dollars lawful money of the United States for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Sealed with our hands and seals and dated this 31st day of March A. D., 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas, the above bounden, John F. Higgins has entered into a certain contract with The Sanitary District of Chicago bearing date March 27, 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for printing and delivering five hundred (500) printed copies of the biennial report for the years 1916 and 1917 of the Trustees of The Sanitary District of Chicago, to the Governor of the State of Illinois and the two branches of the Legislature of the State of Illinois.

Now, if the said John F Higgins shall in all respects well and truly keep and perform said contract on his part in accordance with the terms thereof, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses and attorneys fees, which may in any wise come against The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said John F. Higgins, his agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and, moreover, shall pay all valid claims and demands for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An act to promote the general welfare of the people of this State by providing compensation for accidental injuries or deaths suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, as amended by an act of the General Assembly of the State of Illinois, in force July 1, 1915, which may accrue to each and every person who shall be employed by said John F. Higgins, in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said John F. Higgins, or his

agents, employes or workmen in the premises, and also that any judgment or award of any Board of Arbitrators, or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Acts of the General Assembly of the State of Illinois, in force July 1, 1915, relating to compensation for accidental injuries or deaths suffered by employes, in the course of their employment, when notice of the pendency of such suit or arbitration shall have been given said John F. Higgins shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

JOHN F. HIGGINS, (Seal)

HARTFORD ACCIDENT AND INDEMNITY COMPANY, (Seal)

By THOMAS W. THOMPSON, and
Attorney.

G. W. MOLONEY, (Seal)
Resident Assistant Secretary.

Approved:

JAS. H. LAWLEY,
Chairman, Committee on Finance, The Sanitary District of Chicago.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 10, 1919.

To the Honorable, the President, and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of April and March payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

Nash-Dowdle Company (work on Evanston sewage pumping station)	$ 29,601.25
Nash Bros. (work on Contract No. 1, Desplaines river intercepting sewer)	27,967.94
Nash-Dowdle Company (labor operating pumping plant)	775.00
T. J. Forschner Contracting Company (work on Calumet-Sag pumping station)	2,122.65
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	1,532.01
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	875.00
Jas. O. Heyworth (labor and material on Section 1, extra work, Calumet-Sag Channel)	1,305.04
Yeoman Bros. Company (repairs to bilge pump)	75.00
Adam Schilo Lumber Company (lumber)	34.85
Peth & Goeler (repairs)	17.50
Baltimore & Ohio Chicago Terminal Railroad (labor and material furnished on account of B. & O. C. T. R. R. crossing)	22,230.00
Baltimore & Ohio Chicago Terminal Railroad (labor and material furnished on account of B. & O. C. T. R. R. crossing)	11,500.00
Jas. O. Heyworth (labor for operating pumping plant)	1,032.26
Jas. O. Heyworth (labor for operating pumping plant)	283.87
Jas. O. Heyworth (labor for operating pumping plant)	245.16
The Connersville Blower Company (repairs to blowers)	245.00
Nagel Bros. (chestnut coal)	12.00
United States Rubber Company (hip boots)	10.64
Amount carried forward	$ 99,865.17

Amount brought forward	$ 99,865.17	
Goodyear Rubber Company (rubber boots)	6.50	
Standard Oil Company (installing lights)	6.14	
Burr-Vack Company (1 telephone bracket)	3.50	
		$ 99,881.31

Maintenance and Operation Account.

John McGillen, Clerk (payroll repairs to Main Channel bridges)	$ 182.00	
John McGillen, Clerk (payroll Lawrence avenue pumping station)	153.40	
John McGillen, Clerk (freight charges on fuel to Lawrence avenue pumping station)	87.41	
Commonwealth Edison Company (Mazda lamps)	135.48	
John McGillen, Clerk (gas service)	21.82	
Sullivan Oil Company (cylinder oil)	66.65	
American Blue Print Paper Company (black ink)	34.35	
Burr-Vack Company (stationery)	34.05	
L. Gould & Co. (Star mops)	22.34	
Auto Trimming & Painting Company (painting)	28.00	
The Texas Company (gasoline and oil)	17.28	
Stebbins Hardware Company (padlocks)	14.00	
Link-Belt Company (sprocket wheel)	12.11	
L. Gould & Co. (mops)	5.59	
Chas. Novak & Son (sheet and settings)	4.60	
Auto Parts Company of America (complete set of tools)	4.54	
The Oil & Waste Saving Machine Company (turbine nozzle)	3.10	
Henry Stuckart (scythe snaths)	2.60	
John McGillen, Clerk (freight charges paid I. C. R. R. for fuel to 39th St.)	87.57	
H. W. Johns-Manville Company (cement)	80.33	
Power Coal Company (freight charges)	54.10	
American Supply Company (white waste)	14.42	
Jos. T. Ryerson & Son (shackle and bolts)	8.25	
Jos. T. Ryerson & Son (bar steel)	8.17	
Parker's Towel Supply Company (towel service)	8.00	
Commonwealth Edison Company (electrical supplies)	7.31	
Consumers Company (coal)	4.70	
The Berkshire Company (typewriter paper)	2.00	
		1,104.17

Electrical Department.

John McGillen, Clerk (expenses of employes)	$ 481.44	
John McGillen, Clerk (weekly payroll)	216.10	
John McGillen, Clerk (postage stamps)	112.18	
John McGillen, Clerk (freight charges on insulators)	10.92	
Rhodes Metallic Packing Company (15 sets packing)	352.80	
Monarch Electric & Wire Company (repair parts)	326.82	
The Ohio Brass Company (porcelain insulators)	301.00	
Western Electric Company (magneto testing set, etc.)	280.07	
Western Electric Company (trip oil switches)	267.30	
Chicago Telephone Company (telephone service)	257.94	
Chicago Telephone Company (telephone service)	13.20	
Conroy Boiler & Tank Works (galvanized nuts and bolts)	223.87	
Central Electric Company (washing brushes, etc.)	223.85	
Pittsburgh Transformer Company (1 impedance coil with taps)	202.78	
Chicago Telephone Company (cover cost of 20 empty carboys deducted from their invoice)	100.00	
Commonwealth Edison Company (conduits, etc.)	156.06	
Commonwealth Edison Company (reverse current relays)	144.00	
Delta Star Electric Company (disconnecting switches)	120.58	
Amounts carried forward	$ 3,790.91	$100,985.48

Amounts brought forward	$ 3,790.91	$100,985.48
Chicago Pneumatic Tool Company (universal drill)	116.00	
The Lombard Governor Company (1 hand wheel bracket)	112.03	
Litzinger, Davis Oil Company (gasoline)	109.68	
Ledgerwood Mfg. Company (connecting rod, etc.)	99.33	
The Garden City Sand Company (cement, etc.)	96.25	
Delta Star Electric Company (disconnecting switches)	90.00	
International Harvester Company (bushings, etc.)	64.58	
Patrick Brennan (personal injuries)	60.00	
G. J. Cushing (personal injuries)	52.00	
Crane Company (gate valve, etc.)	51.96	
Aurilla Scully, Admx. (compensation for death of husband)	50.00	
Westinghouse Electric & Mfg. Company (gaskets, etc.)	38.94	
Wm. Heggie (repairing auto, etc.)	91.26	
Wilbur J. Connell (machine bolts, etc.)	66.97	
American Supply Company (cheese cloth)	49.95	
Weston Electrical Instrument Company (volt meter)	45.22	
A. Sharp (axle, etc.)	44.50	
The Fred J. Ringley Company (printing)	41.25	
H. P. Reger & Co. (installing new grates, etc.)	40.30	
Schweitzer Conrad, Inc. (high voltage detector)	39.80	
R. Hanisch Sons Company (protection for electrical apparatus)	39.16	
Monarch Electric & Wire Company (galvanized clamps)	38.47	
Chicago Engineer Supply Company (oil pumps)	36.00	
Yates Bros. Transfer & Express (hauling charges)	35.52	
General Electric Company (controlling switches)	32.76	
Patterson & Schroeder Supply Company (drills, etc.)	29.47	
American Supply Company (sanitary wipers)	25.87	
Standard Oil Company (gasoline, etc.)	25.67	
James Carmichael (connecting hot water heater)	25.00	
The Texas Company (kerosene and gasoline)	24.00	
Farrell, Kemp & Gushe Company (tube for water gauge)	23.75	
Habisch Bros. (repairs)	23.10	
Inter-State Brass Company (round brass rod, etc.)	19.85	
Pittsburgh Transformer Company (freight charges)	19.24	
Stebbins Hardware Company (flat head screws, etc.)	17.54	
DeVoe & Raynolds Company (painting)	16.07	
The Lord & Bushnell Company (lumber)	14.53	
Theo. B. Robertson Products Company, Inc. (soap powder)	13.73	
Stewart-Warner Speedometer Corporation (swivel joints, etc.)	13.44	
L. Gould & Co. (toilet paper, etc.)	12.98	
L. Gould & Co. (toilet paper)	8.33	
Parker's Towel Supply Company (towel service)	12.25	
Henry Stuckart (nails, etc.)	11.54	
M. W. Powell Company (asphalt compound)	10.20	
Monarch Electric & Wire Company (elbows)	10.02	
The Lord & Bushnell Company (lumber)	9.70	
Western Electric Company (wire)	122.26	
Western Electric Company (friction tape, etc.)	80.36	
Western Electric Company (stranded cable)	77.31	
The Texas Company (oil)	109.45	
Delta Star Electric Company (clamp bases and terminal lugs)	76.48	
Commonwealth Edison Company (solid wire)	54.19	
Monarch Electric & Wire Company (fibre polished tubing)	44.10	
Wilbur J. Connell (galvanized lag screws)	38.66	
The Carl Anderson Company (repairing low pressure valve)	32.50	
Wilbur J. Connell (blow torches, etc.)	27.74	
Armstrong Bros. Tool Company (high speed cutters)	13.94	
Amounts carried forward	$ 6,376.11	$100,985.48

Amounts brought forward	$ 6,376.11	$100,985.48
Geo. L. Hammons, Inc. (indicator, etc.)	13.15	
United States Rubber Company (hip boots)	10.77	
Jos. T. Ryerson & Son (6 angles)	9.36	
Central Electric Company (cutter steel service box)	9.02	
Central Electric Company (lamp changer, etc.)	6.45	
John McGillen, Clerk (charges on shipment)	.75	
Exide Battery Depots, Inc. (shoe pegs for seps.)	.20	
John McGillen, Clerk (weekly payroll)	79.20	
General Electric Company (motors, etc.)	612.00	
H. P. Reger & Co. (cast iron boiler section)	436.00	
Wilbur J. Connell (machine bolts, etc.)	167.48	
Commonwealth Edison Company (refillable fuses, etc.)	151.73	
J. P. Kearns & Co. (gunny sacks)	7.97	
Mrs. Geo. Bedell (cleaning and repairing 2 rugs)	7.50	
The Joliet Welding & Repair Shop (1 cylinder)	7.50	
E. B. Bronson (1 set skid chains, etc.)	7.00	
The White Company (grease cups, etc.)	6.51	
Shavings & Sawdust Company (sawdust)	6.50	
C. Hacker Company (plate glass)	5.10	
Auto Radiator Mfg. Company (radiator repaired, etc.)	5.00	
Patterson & Schroeder Supply Company (galvanized hose clamps)	4.98	
Staehley Bros. (vulcanizing case)	4.00	
Samuel Harris & Co. (clarite bits, etc.)	3.68	
S. F. Bowser & Co. (filter bags)	3.48	
Fischer & Hayes Rope Company (manila rope)	2.75	
Westinghouse Traction Brake Company (pressure gauge)	2.56	
Fuller Morrison & Co. (1 dozen sanitary flushers)	2.69	
Miller Hardware Company (long handled spade)	2.35	
Auto Parts Company of America (Ford radiator hose)	1.41	
Stebbins Hardware Company (chest handles)	1.00	
Joliet Motor Company (bulbs)	.80	
Geo. B. Limbert & Co. (malleable bushings)	.79	
National Lead Company (freight charges)	.52	
		7,956.24
Clerical Department.		
John McGillen, Clerk (expenses of employes)		3.00
General Account.		
Standard Oil Company (rental electric current, etc.)	$ 2,672.04	
John McGillen, Clerk (amount paid U. S. Railroad Administration, expenses of Trustees, Chicago to New Orleans and return)	353.04	
		3,025.08
Law Department.		
John McGillen, Clerk (expenses of employes)	$ 88.08	
Eugene J. Holland (services rendered in connection with Lake Level Controversy)	350.00	
Martin Delaney (services rendered and expenses incurred)	199.00	
Henry Latz (services rendered examining property)	25.00	
Barr, McNaughton & Barr (legal service, tax matters, Board of Review, Will County)	5,000.00	
Quinn & Quinn (services rendered and expenses incurred)	3,041.97	
		8,704.05
Illinois and Michigan Canal and Illinois River Conditions Department.		
Burr-Vack Company (calendar pads)	$ 15.72	
Hotel Atlantic (room and restaurant fees)	15.70	
Amounts carried forward	$ 31.42	$120,673.85

Amounts brought forward		$ 31.42	$120,673.85
Public Service Company of Northern Illinois (electrical energy)		11.71	
The Northwestern Stove Repair Company (stove casting)		10.72	
Stebbins Hardware Company (wire rope clips, etc.)		10.12	
Hotel Atlantic (room and restaurant fees)		5.20	
Marie Long (high water gauge readings)		8.00	
Bernhard Fidler (resetting gauge)		2.00	
People's Telephone Company (telephone service)		9.10	
			88.27

Miscellaneous Accounts.

John McGillen, Clerk (wrecking Stockyards testing station, etc., payroll)—			
Construction Account	$ 266.40		
Maintenance and Operation Account	214.80		
		$ 481.20	
John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 1.90		
Clerical Department	13.60		
Clerical Department	4.85		
General Account	1.22		
		21.57	
E. H. Heilbron (expenses of employes)—			
Illinois Valley Department	$ 14.72		
Law Department	44.70		
		59.42	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 21.30		
Maintenance and Operation Account	47.69		
Police Department	.20		
		69.19	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 48.66		
Maintenance and Operation Account	18.04		
		66.70	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 20.35		
Maintenance and Operation Account	45.01		
Police Department	.10		
		65.46	
			763.54
Grand Total			$121,525.66

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEO. W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that early in the year 1918 plans and specifications were prepared for the construction of the Morton Grove sprinkling filter plant; that bids for said work were received by the Board but the Board on August 1, 1918 (page 866 of the Proceedings), rejected all bids for the reason that the cost of said work was excessive.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that it is advisable to readvertise for bids for doing said work, and he requests that the Clerk be authorized so to do, in accordance with the original plans and specifications except that the article of the General Conditions relating to extra work has been changed to conform to the latest specifications relating thereto.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to advertise for bids for the construction of the Morton Grove sprinkling and filter plant in accordance with the specifications above specified.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
PATRICK J. CARR,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting of April 3, 1919, (page 301 of the Proceedings) bids for repairing two scows of the Sanitary District, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is Abraham Burrell.

Your Committee further reports that it is of the opinion that said bidder is competent to comply satisfactorily with the terms and conditions of said contract, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for repairing two scows of the Sanitary District be, and the same is hereby, awarded to Abraham Burrell for the actual cost of labor and material entering into said work, and it is further

Ordered, That the Chairman of the Committee on Finance of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Abraham Burrell.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on August 8, 1918 (page 892 of the Proceedings), the T. J. Forschner Contracting Company entered into a contract with the Sanitary District for constructing the Calumet sewage pumping station and furnishing and installing certain equipment therein; that certain pumps designed by Mr. A. B. Wood, Consulting Engineer, are a part of said equipment, and are to be built by the Southwark Foundry and Machine Company.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the question has arisen as to whether thrust collars, which are not provided in the specifications and plans, should be placed on the shafts of said pumps in order to prevent the runners from wearing on the casings, and he gives it as his opinion that said thrust collars should be installed by the manufacturer of said pumps and that the estimated cost of the same, $1,000.00, be allowed said T. J. Forschner Contracting Co. as an extra under its said contract.

Your Committee, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to order the T. J. Forschner Contracting Co. to perform the work above specified under the extra work clause of its said contract, provided the cost thereof shall not exceed the sum of $1,000.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Electrical Engineer has prepared specifications and drawings for a conduit line from Fifty-sixth street and Western avenue to the Calumet Sewage and Pumping Station, in which conduit line will be installed the necessary cables to supply said station with electrical energy for its operation.

Your Committee further reports that it has considered said specifications and drawings and has approved the same, and therefore recommends the passage of the following order:

Ordered, That the specifications and drawings prepared by the Electrical Engineer for the work above specified be,

and the same are hereby approved, and it is further

Ordered, That the Clerk be, and he is hereby, authorized and directed to advertise for bids for the performance of the work above specified in accordance with the specifications and drawings so prepared by the Electrical Engineer.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it is necessary to furnish and place certain cast iron drain pipes in the concrete floors of the Calumet Sewage Pumping Station. This work is part of the plumbing to be done on said station, bids for which have not yet been asked for because of the present high cost of that character of work, and he requests that he may be authorized to direct the T. J. Forschner Contracting Co., which is now constructing the said pumping station, to perform said work under the extra work clause of its contract with the Sanitary District, dated June 20, 1918 (page 893 of the Proceedings), at a cost of not to exceed $302.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized to direct the T. J. Forschner Contracting Co. to perform the work above specified under the extra work clause of said contract, provided the cost of the same shall not exceed the sum of $302.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that he has received informal bids from different inspection firms for the sampling and testing 150,000 barrels of cement to be used during the coming season on the work of the Sanitary District; that the lowest bid received was from Walter H. Flood of 1.2 cents per barrel, amounting to

$1,800.00 for each physical test and $3.00 each for seventy-five chemical tests, amounting to $225.00, a total of $2,025.00, and he recommends that said bid be accepted.

Your Committee, having canvassed said bid, is of the opinion that the recommendation of the Chief Engineer be concurred in, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to accept the bid of Walter H. Flood for doing the work above specified, provided the cost of the same shall not exceed the sum of $2,025.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that under Section 14 of the agreement dated November 2, 1916, (page 442 of the Proceedings), between the Sanitary District and certain railroad companies, relating to the crossing of the rights-of-way of said railroad companies by the Calumet-Sag Channel, the Sanitary District agreed to construct a new through plate girder bridge to carry four tracks of the Grand Trunk Western Railway Company. In order to perform this work, it is necessary to divert the existing tracks of said company, and in so doing to furnish about 120,000 feet B. M. trestle timber for the construction of temporary supports of said tracks across and adjacent to said channel. He further states that said Railway Company has requested the Sanitary District to furnish said trestle timber at an estimated cost of about $7,000.00. The Chief Engineer requests that he be authorized to prepare specifications for the purchase of said material, and that the Clerk be directed to advertise for bids therefor.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized to prepare specifications for the purchase of the trestle timber above specified, and the Clerk be, and he is hereby, authorized and directed to advertise for bids therefor in accordance with the specifications so to be prepared by the Chief Engineer.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

RECESS.

Mr. Clark moved that the Board take a recess for five minutes to allow the Committee on Engineering to consider a matter and report to the Board, at the expiration of which time the Board reconvened.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on February 27, 1919, (page 210 of the Proceedings) authorized and directed the Chief Engineer to change the contract entered into between the Sanitary District and Nash-Dowdle Co., dated November 14, 1918 (page 1243 of the Proceedings), to provide that the pumps to be furnished under said contract should be constructed at Aurora, Illinois, in the shops of the American Well Works, instead of at New Orleans, La., in the shops of the Dibert, Bancroft & Ross Co.

Your Committee further reports that the Board on March 20, 1919, (page 282 of the Proceedings) reconsidered the vote by which the report relating thereto and the order above specified was passed and referred said report and order to your Committee on Engineering.

Your Committee further reports that it has again considered the subject matter of said report and order of February 27, 1919, and is of the opinion that said report should be adopted and said order be passed as originally presented to the Board, and herewith presents to the Board said original report and order with recommendation that the same be adopted and passed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel Carr, Clark, Healy, Lawley, Littler and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering, referred to in the foregoing report:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on November 14, 1918 (page 1243 of the Proceedings) entered into a contract with the Nash-Dowdle Company for furnishing, delivering and erecting the building, pumping machinery, electric equipment, switch board, conduit and wiring of the Evanston Sewage Pumping Station as specified under Divisions A, B, C and D of said contract.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the specifications under Division B provide that "the pumps will be built in New Orleans, La., in the shops of the Dibert, Bancroft & Ross Co.," and the contractor requests that the specifications be changed so as to read "the pumps will be built at Aurora, Ill., in the shops of the American Well Works," and the Chief Engineer states that he does not object to said change in the specifications.

Your Committee further reports that the Attorney is of the opinion that from an examination of the correspondence heretofore had between said contractor and the Dibert, Bancroft & Ross Co.

said Nash-Dowdle Company is not obligated in any way to award said contract to the said Dibert, Bancroft & Ross Co. and your Committee is of the opinion that the request of said contractor to make said change in the specifications be granted, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to change said contract between The Sanitary District of Chicago and the Nash-Dowdle Company in the particular above specified, provided said contractor and the surety on its bond consent in writing to such a change.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler and Paullin—Seven.

Nays—Mr. Nance—One.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents two renewal contracts with the Boss Nut Company, 1732 N. Kolmar avenue, and the Fearon-Tillotson Foundry Company, 1743 North Kenton avenue, and a new contract with the Garden City Upholstering Company, 2420 W. 22nd street, wherein said companies agree to take, and the Sanitary District agrees to furnish, electrical energy upon the terms and conditions set forth in said contracts, which have been approved by the Electrical Engineer.

Your Committee, having considered the contracts, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contracts which have been properly executed by said companies.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT. A. MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, April 10, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 budget:

Engineering Department—

Wm. A. Dundas, Asst. Mechanical Engineer, $175.00 mo.

D. P. Fleming, Asst. Mechanical Engineer, $175.00 mo.

P. J. Erickson, Laborer, 45c per hour.

REINSTATEMENTS.

Due to honorable discharge from the U. S. Army or Navy service.

Electrical Department—

P. B. Brown, Operator, $180.00 mo.

Chas. Kaiser, Lineman, $165.00 mo.

C. D. Case, Electrician, $155.00 mo.

T. J. Considine, Relief Operator, $155.00 mo.

Michael Tyrrell, Operator, $125.00 mo.

Stuart E. Ward, Groundman, $115.00 mo.

DROPPED FROM SERVICE.

Electrical Department—

C. R. Lyons, Carpenter, 80c per hour.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from William Kramer, Engineer, Stock Exchange Building, Chicago, dated April 2, 1919, submitting a claim of $617.99 for services rendered P. R. Bannon, who has a suit against the Sanitary District for overflow of land in Will County, Ill.

Referred to the Committee on Illinois Valley.

MISCELLANEOUS AND NEW BUSINESS.

The subject of purchasing a boat for the Police Department of the Sanitary District was considered.

Mr. Lawley moved that the Marshal be authorized to purchase a boat for the use of the Police Department, at a cost not to exceed $1,450.00.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, APRIL 17, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of the Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Absent—Mr. Paullin—One.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meeting of April 10, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

Mr. Lawley, chairman of the Committee on Finance, presented the following communication:

CHICAGO, April 17, 1919.

To the Honorable, the President and Members of the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN—On April 10, 1919 (page 317 of the Proceedings) the Board authorized the Chairman of the Committe on Finance of the Board of Trustees of the Sanitary District and the Clerk to execute in duplicate a contract between the Sanitary District and Abraham Burrell, for the repair of two scows of the Sanitary District.

The Chairman of said committee reports that he has executed said contract in accordance with said order and that the Clerk has attested same and affixed the seal of the District thereto.

The Chairman of said committee herewith transmits said contract to the Board for publication in its Proceedings.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman, Committee on Finance.

Mr. Lawley moved that the communication and contract with Abraham Burrell be printed in the proceedings.

The motion prevailed.

The following is the contract:

THE SANITARY DISTRICT OF CHICAGO.
CONTRACT FOR THE REPAIRS TO TWO SCOWS.

THIS AGREEMENT, Made and entered into this 10th day of April A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and Abraham Burrell of the City of Chicago, County of Cook and State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as herein provided to the Contractor by the said Sanitary District, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all plant, appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for the Repairs to Two Scows of The Sanitary District of Chicago.

The work to be done consists of replacing any boards in the sides, bottom and deck and any timber or metal in the interior framing and bracing of the two scows, which may, upon inspection, be found necessary in order to restore the scows to first-class condition. It also consists of any recaulking and painting which may be ordered by the Engineer.

Materials furnished shall be of acceptable quality and shall be subject at all times to the approval of the Engineer. Any material which has been rejected by the Engineer shall be immediately removed from the site of the work.

The Contractor shall employ competent foremen and workmen. None but men expert in their respective branches of work shall be employed where special skill is required.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized assistants, by whose measurements and calculations the quantities and amounts of the several kinds of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Sanitary District shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirits and to the terms and conditions herein expressed.

To prevent all disputes and litigation it is further agreed by and between said Sanitary District and said Contractor, that said Engineer shall determine all questions in relation to said work and the performance thereof, and he shall in all cases decide every question which may arise relative to the execution of the work under the contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Sanitary District" are used in this agreement, they shall be understood to mean the Sanitary District of Chicago.

Wherever the words "Chief Engineer" or "Engineer" are used in this agreement, they shall be understood to mean respectively the Chief En-

gineer of the Sanitary District of Chicago or other designated Engineer in charge of the work or of any portion thereof.

Wherever the word "Contractor" is used in this agreement, it shall be understood to mean the person or persons, co-partnership or corporation entering into this contract as the party of the second part.

Wherever the words "the work" are used herein, they shall be interpreted to mean the work, including all material, labor, tools and all plant, appliances and appurtenances, necessary to perform and complete everything specified in this contract in full compliance with all of the terms and conditions hereof.

Wherever under the provisions hereof an order from the Engineer to the Contractor is required, such an order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of the Sanitary District of Chicago.

In estimating the cost of the work, the cost of material shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amounts paid for same as shown by the payrolls of the Contractor, with cost of insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by the per cent bid for superintendence, use of tools and profit. The Contractor shall if requested by the Chief Engineer verify by his affidavit the correctness of the amounts paid for material and labor.

All books and accounts, kept by the Contractor in connection with this contract, shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked, the cost of materials and other information required by the Engineer. The Contractor shall, on request furnish the Engineer with copies of expense bills for transportation charges on all material and supplies shipped to or from the work under this contract.

The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital services and the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled " An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, "approved June 10, 1911, in force May 1, 1912", approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplemental thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or deaths suffered by any of his employes in and about the performance of this contract.

It is further agreed by and between the parties hereto that if said Contractor abandons this contract or fails financially, or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for finishing the repair work herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may itself complete the work provided for hereunder, by employing such men and by purchasing or otherwise obtaining such material, supplies, machinery, implements, tools and plant as may be necessary to complete the work herein specified, or any part thereof, and in completing the said work by contract or by itself doing the work herein specified, said Sanitary District may remove the

said scows from the premises of said Contractor, or may have access to the premises of said Contractor and may use such material, supplies machinery, implements, tools and plant as may be the property of said Contractor, and all costs and expenses incurred by the Sanitary District in completing such work in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

The Contractor agrees to begin the work covered by this contract within ten (10) days for the date of the execution of the contract and to prosecute the same with all due diligence and to entirely complete the work within sixty calendar days thereafter.

And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the material, and for doing all the work contemplated and specified in this contract, also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every discription connected with the work; and for well and faithfully completing the work, and the whole hereof, in full compliance with the contract and the requirements of the Engineer under it, to-wit:

For Hauling Upon Bank, Scow No. 1.

The sum of eighty (80) cents per hour for wages of mechanics and carpenters, and $8.00 per day wages of foreman and actual cost of material.

For Hauling Upon Bank, Scow No. 2.

The sum of eighty (80) cents per hour for wages of mechanics and carpenters, and $8.00 per day wages of foreman and actual cost of material.

For Repair Work on Scows.

The actual cost of labor calculated as follows:

Eighty (80) cents per hour for wages of mechanics and carpenters, and $8.00 per day wages of foreman and the actual cost of material.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents, and patented material, appliances and processes used in the work described in the contract. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses, upon bills presented by said Contractor and approved by said Engineer. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half per cent (87½%) of the value of the work properly performed under this contract, and that the remaining twelve and one-half per cent (12½%) shall be reserved by the said Sanitary District as part security for the faithful performance hereof, and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after the payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials, except in the manner set forth in this contract, nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate, pay, and it hereby binds itself to pay the said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

IN WITNESS WHEREOF, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has hereunto set his hand and seal.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Committee on Finance.

Attest:
JOHN MCGILLEN (Seal)
Clerk.

ABE BURRELL (Seal)

Approved April 16, 1919:
H. P. RAMEY,
Division Engineer.
G. M. WISNER,
Chief Engineer.
CHAS. E. ANTHONY,
Asst. Attorney.
C. ARCH WILLIAMS,
Attorney.

REPORTS OF COMMITTEES.

Judiciary.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary reports that on August 27, 1916, Della Thieverage, brought suit against the Sanitary District in the Superior Court of Cook County, General Number 319,974, to recover damages in the sum of $10,000.00, for personal injuries claimed to have been sustained by her on July 30th, 1915, by falling into an excavation made by the Sanitary District, on Washington street near State street.

Your Committee further reports that the attorney has given it as his opinion that while there is some doubt about the liability of the Sanitary District, yet it is advisable to accept her offer to settle said suit for the sum of $150.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $150.00, payable to Della Thieverage and deliver the same to her on a voucher to be approved by the attorney upon her furnishing a release in full of all claims or demands for damages against the Sanitary District because of said action and upon her furnishing such other releases as the attorney may deem necessary and also on the receipt of a stipulation signed by her attorneys of record to dismiss said suit without costs to the Sanitary District.

Respectfully submitted,
WM. J. HEALY,
Chairman.
H. E. LITTLER,
PATRICK J. CARR,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary respectfully represents that it is advised by the attorney of the District that on August 2, 1918, Ransom E. Walker, administrator of the estate of Richard J. Ahrendt, deceased, began

suit in the Superior Court of Cook County, General Number 337,790, against the Sanitary District and the United States Brewing Company to recover the sum of $10,000 damages, alleged to have been caused by negligence on the part of said defendants, causing the death of said decedent. The Sanitary District was insured against actions of this character by the United States Fidelity & Guaranty Company, Policy No. M-22, 583, dated January 15, 1918, and notified said company that it would be held responsible for any damages occasioned by said accident. The said insurance company undertook the defense of said suit and has filed certain pleas therein on behalf of the Sanitary District, and as far as the record shows has assumed the defense of said suit, collaborating with the attorney of the District. The insurance company now claims that under a strict interpretation of said contract for insurance as applied to the particular facts in the case it is not liable to respond in damages under said policy of insurance, but has performed considerable work in investigating the facts and circumstances of the case and the law pertaining thereto, and is willing to proceed with this work if such action on its part will not be construed as a waiver on the part of either the said insurance company or the Sanitary District to insist upon their legal rights under said policy of insurance.

Your Committee herewith transmits to the Board a stipulation in accordance with the statement hereinabove set forth, and requests that the attorney may be granted authority to enter into said stipulation on behalf of the Sanitary District when the same is duly executed by said Insurance Company's attorneys.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Attorney of the District be and he is hereby authorized and directed to enter into the stipulation above set forth when the same has been duly signed by the Attorneys for said Insurance Company.

Respectfully submitted,
WM. J. HEALY,
Chairman.
H. E. LITTLER,
PATRICK J. CARR,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that in accordance with the terms of the contract dated November 4, 1915 (page 1547 of the Proceedings), between A. Guthrie & Co., Inc., and the Sanitary District, for the excavation and collateral work on contract section 14 of the Calumet-Sag Channel, the Sanitary District has retained from time to time as a reserve percentage 12½ per cent of the sums earned by said contractor which on March 31, 1919, amounted to $51,395.34, which sum under the terms of said contract was not to be paid said Contractor until thirty days after the completion of all work specified in said contract, but said contractor has requested the Sanitary District to pay it $40,000.00 of said reserve percentage.

Your Committee further reports that it is advised by the Chief Engineer that the work covered by said contract is 99.63 per cent completed; that said contractor

has furnished the Sanitary District with a written statement of its resources and liabilities from which it appears that the net resources of said company on December 31, 1918, were $1,955,233.77.

Your Committee having considered the matter is of the opinion that the request of said contractor should be granted, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to pay upon the voucher of the Chief Engineer to A. Guthrie & Co., Inc., the sum of $40,000.00, out of the reserve percentage retained by the Sanitary District on said contract for the excavation and collateral work on contract section 14 of the Calumet-Sag Channel, provided that said contractor obtains the consent in writing of the surety on its bond that said payment be made and that all conditions and terms of said contract shall remain in full force and effect.

Respectfully submitted,
JAMES H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs leave to report that one hundred and fifty bonds of the thirtieth issue of The Sanitary District of Chicago in the amount of $150,000.00, will mature April 25, 1919.

Your Committee further reports that the semiannual interest on the thirtieth issue of bonds of The Sanitary District of Chicago amounting to the sum of $57,000.00 will also fall due April 25, 1919, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby instructed to draw a warrant payable to the order of the Treasurer of the Sanitary District for the sum of $207,000.00 to pay the principal and semiannual interest due April 25, 1919, on bonds of the Sanitary District as follows:

The principal of one hundred fifty bonds, numbered 42,039 to 42,188 inclusive, for $1,000.00 each of the thirtieth issue	$150,000.00
Six months interest on $2,850,000.00 of the thirtieth issue at 4 per cent per annum	57,000.00
Total	$207,000.00

Respectfully submitted,
JAMES H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the General Electric Company with the Fidelity and Deposit Company of Maryland thereon as surety, for the faithful performance of its contract for furnishing and delivering lead covered cable to The Sanitary District of Chicago, and therefore, recommends the passage of the following order:

Ordered, That the bond of the General Electric Company for the faithful performance of its contract for the furnishing and delivering of lead covered cable to The Sanitary District of Chicago, said bond being in the penal sum of $48,790.00, be and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAMES H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

The following is the contract and bond of the General Electric Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR LEAD-COVERED CABLE.

THIS AGREEMENT, Made and entered into this 27th day of March A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the General Electric Company, a corporation organized under the laws of the State of New York, party of the second part hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering lead-covered cable as called for under the attached specifications, complete, as specified.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Electrical Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose measurements and calculations the quantities and amounts (including extras) of the several kinds of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Electrical Engineer or other Engineer designated by the Electrical Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor, that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide every question which may arise relative to the execution of the work under this contract on the part of the

said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Electrical Engineer" or "Engineer" are used herein, they shall be understood to mean the Electrical Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Electrical Engineer of The Sanitary District of Chicago.

SPECIFICATIONS FOR LEAD-COVERED CABLE. THESE SPECIFICATIONS MUST NOT BE ALTERED.

General.

1. The cable required under these specifications will be used for underground transmission and distribution of electrical energy in the form of three phase, alternating current at a frequency of sixty (60) cycles per second. The transmission cables shall be designed for a working pressure of 12,000 volts and the distribution cables for a working pressure of 5,000 volts. Three conductor cable is required for the 12,000 volt service and four conductor for the 5,000 volt service.

Conductors.

2. Each conductor shall be composed of a nineteen (19) strand, concentric lay cable, each strand being of tinned annealed copper wire having a conductivity as specified in Section 675 of the Standardization Rules of The American Institute of Electrical Engineers. The aggregate cross sectional area of all of the individual strands of each conductor shall be equivalent to the cross sectional area of a solid conductor of the sizes specified.

Insulation.

3. Each conductor shall be insulated with the required wall of black varnished cambric tape or of black varnished cambric tape and thirty (30) per cent new, unused Para rubber. If rubber is used, same shall be placed between the conductor and the varnished cambric tape and the thickness of the wall of rubber shall be not greater than five sixty-fourths (5/64ths) of an inch for the 12,000 volt cable and two sixty-fourths (2/64ths) of an inch for the 5,000 volt cable. Only the best grade of black varnished cambric tape shall be used. A thin layer of plastic, non-hardening, insulating compound shall be applied between the layers of varnished cambric tape during manufacture of the cable.

4. The separate conductors after being insulated, shall be twisted together and the interstices filled with jute treated with an insulating compound, making a firm, round cable which shall then be covered with the required wall of black varnished cambric tape applied in the same manner as for the individual conductors.

The following table shows the thickness of insulation in inches required for the 12,000 volt and the 5,000 volt cable:

Working Voltage	Insulation around each Conductor	Insulation around all Conductors
12,000	6/32 inch	6/32 inch
5,000	3/32 inch	3/32 inch

Sheath.

5. After insulating, as specified, the built-up cable shall be encased in a continuous lead sheath one-eighth inch (⅛") thick, composed of commercially pure lead alloyed with two (2) to three (3) per cent of pure tin and evenly distributed. The sheath must fit the cable closely and care must be exercised to prevent the damaging of the varnished cambric jacket when applying the lead sheath.

Quantity.

6. Approximately sixty thousand (60,000) feet of No. 0000, three (3) conductor, 12,000 volt and two thousand (2,000) feet of No. 0000, four (4) conductor, 5,000 volt cable will be ordered within sixty (60) days after the contract is awarded. These quantities are approximate and ten (10) per cent, more or less, of each class of cable, may be ordered under this contract. Orders will, so far as possible, be placed so that the manufacture of the cable can be continuous and carload shipments can be made as fast as cable is completed.

Lengths.

7. The cable must be delivered in lengths as specified in each order, each

length to be shipped on a separate reel which shall be plainly marked showing the number of the reel, number of feet on the reel, size of conductor, number of conductors, working voltage, weight of reel only, weight of reel and cable, order number and section number.

Reels.

8. The District will deliver empty reels to the railroad company consigned to the Contractor and have same shipped freight collect and will forward bill of lading to Contractor covering each shipment.

Tests.

9. The three-conductor, 12,000 volt cable shall withstand a dielectric test of 30,000 volts alternating current and the 5,000 volt, four-conductor cable shall withstand a dielectric test of 14,000 volts alternating current. Tests to be applied for a period of five minutes at operating frequency after installation and in each case the test voltage shall be applied between all conductors and the lead sheath and between individual conductors.

Guarantees.

10. All cable shall be guaranteed free from mechanical and electrical defects in materials and workmanship for a period of two years from date of shipment, and any cable proving defective within said period shall be replaced at the expense of the Contractor.

Delivery.

11. All cable shall be delivered, freight prepaid, at railroad team tracks in the City of Chicago to be designated by the Engineer. All cable called for on each order must be delivered within forty (40) days from date of said order. The Contractor shall notify the Engineer, in writing, as soon as cars are loaded for shipment, giving car number, order number, reel and section numbers, size and quantity of cable, and shall forward with such statement bill of lading covering the shipment.

GENERAL CONDITIONS.

Sanitary District Law.

Art. 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove Obstructions from the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, and all acts amendatory thereof and supplemental thereto.

Investigations.

Art. 2. The Contractor shall make all necessary investigations in order to become thoroughly informed as to the facilities for delivering the material or completing the work as specified. No plea of ignorance of conditions that exist, or that may hereafter exist, or of difficulties that will be encountered in making such deliveries as a result of a failure to make the necessary investigations, will be accepted as a sufficient excuse for a failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claims whatsoever for extra compensation.

Additions and Alterations.

Art. 3. It is further agreed that the said Sanitary District may, at any time during the life of this contract, make any minor additions to, or alterations in, or deviations from these specifications without invalidating this contract, and a fair value of the same shall be added to or deducted from, as the case may be, the moneys herein agreed to be paid by the Sanitary District, provided that nothing shall be considered an extra charge in excess of the amount herein agreed to be paid unless a proper estimate in writing of the cost of the same before its commencement shall have been submitted to and signed by said Engineer.

The written approval hereinabove required on the part of the said Engineer shall be a condition precedent to any recovery by the Contractor for extra compensation.

Extras.

Art. 4. Whenever work is required to be done, which is not now contemplated and covered by the prices herein stipulated, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided he enters upon such work with a knowledge of the prices so fixed by the said Engineer; but if the Contractor declines to execute said

work at the prices fixed by the said Engineer, then the Sanitary District may contract with any person or persons for its execution the same as if this contract had never existed; and if extra work, or work not provided for in this contract, is performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall deem just and reasonable, and his decision shall be final and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if the extra work done under this contract is of such a nature, being distinct from other work being done by said Contractor, that, in the opinion of the Engineer, the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay, in full satisfaction for the same, the actual cost of the work, as determined by the Engineer, with fifteen per cent (15%) added for superintendence, use of tools and profit, provided that nothing shall be deemed extra work which can be measured or estimated under the provisions of this contract.

Estimating Extras.

Art. 5. It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of delay or of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto. In estimating the cost of extras, the cost of material shall be the actual price for same delivered as herein specified. The cost of labor shall be taken as the amounts paid for same as shown by the payrolls of the Contractor, with cost of insurance added, when such can be shown to have been paid. No charge for cost of administration will be allowed.

Supervision.

Art. 6. All deliveries of material under this contract shall be made under the direction and supervision of the Engineer and his properly authorized assistants.

Materials, Workmanship and Inspection.

Art. 7. All materials shall be of the specified quality, and will be subject to rigid inspection. If, in the opinion of the Engineer, said materials are not in accordance with the specifications, the same shall be made to conform therewith.

Progress Certificates.

Art. 8. It is further expressly provided that the granting of any progress certificate or the payment of any moneys hereunder shall in no way lessen the liability of the Contractor to replace any defective material, although the defect in the same may not have been detected at the time such certificate was given, or acted upon.

Patents.

Art. 9. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expense that may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any materials, machinery, devices, apparatus or process furnished or used in the performance of this contract, and in the event of any claim, suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the said Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 10. It is further agreed that if any damage shall be done by the Contractor or by any person or persons in his employ to any personal property, the Engineer shall have the right to estimate the amount of said damage, and to cause the Sanitary District to pay the same to the owner of said property and the amount so paid for said damages shall be deducted from the money due said Contractor under this Contract. Said Contractor covenants and agrees to pay all damages for any personal injury or death sustained by any person, growing out of any act or doing of said Contractor, or of the Contractor's employes that is in the nature of a legal liability, and the Contractor hereby agrees to indemnify and save the Sanitary Dis-

trict harmless against all suits or actions of every name and description brought against said Sanitary District to recover damages for or on account of any such injuries or death sustained by any person or persons from said Contractor or his agents or employes, in the performance of this contract; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, or his agents or employes; and it is further agreed that so much of the money due to the Contractor under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of said Board of Trustees.

Employers' Liability Act.

Art. 11. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital attendance and the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplemental thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District will not recognize any cidental injuries or death suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 12. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor will be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign, by power of attorney or otherwise, any portion of the moneys that may become due through the performance of the work under this contract.

Liens.

Art. 13. If at any time during the performance of this contract, the said Contractor shall fail or neglect to pay for any labor performed, material or equipment furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon or on account of said work for thirty (30) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor or for materials, equipment, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make the payments hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporations, for labor, materials, equipment, tools, machinery, appliances, fuel, provisions, or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time.

Art. 14. The Contractor agrees to begin the work covered by this contract immediately upon approval by the Board of Trustees of said Sanitary District of the bond of said Contractor, and to complete the delivery of cable called for on each order within forty (40) days after the date of such order.

It is understood and agreed that

Time is of the essence of this contract, and that a failure on the part of any Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 15. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete delivery of cable called for on each order within the time specified in Article 14, then said Contractor shall pay to said Sanitary District the sum of ten dollars ($10.00) for each and every day that said Contractor shall be in default in the delivery of cable on each order.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not deliver the cable covered by this contract on or before the time specified herein for the delivery of same, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to time and liquidated damages for delays.

Extensions or Additions.

Art. 16. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to liquidated damages, and the said contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 17. The Contractor shall delay or suspend the progress of the work or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, providing, that in the event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Forfeiture of Contract.

Art. 18. It is further agreed by and between the parties hereto that if said Contractor abandons this contract or fails financially, or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same, or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the cable herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of cable as the said Contractor shall

fail to furnish and deliver as herein specified, notwithstanding such forfeiture, the cost of obtaining said cable, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Unavoidable Delay.

Art. 19. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government, if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 19), in the opinion of the Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless the Contractor notify the Engineer in writing within four (4) days after the commencement of such delay.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 19), except for extra premiums on his bond, actually paid by said Contractor on account of said additional times so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Contractor's Bond.

Art. 20. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

Art. 21. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the materials, and for doing all the work contemplated and specified in this contract, also for all loss or damage, arising out of the nature of the work aforesaid or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work, and the whole thereof, in full compliance with the specifications, and the requirements of the Engineer under them and to allow the credits as shown, to-wit:

LEAD-COVERED CABLE.

Size of Conductors	Number of Conductors	Working Voltage	Price Per Foot
No. 0000 B. & S.	3	12,000	$1.59
No. 0000 B. & S.	4	5,000	$1.09

CABLE REELS.

Size	Price Each Delivered	Credit Each F. O. B. Cars Chicago
60"x24"	$30.00	$30.00
60"x41"	$30.00	$30.00

Payment.

Art. 22. The Contractor shall render bills, in duplicate, for the material furnished immediately upon delivery of same. The Sanitary District agrees to pay said Contractor at the prices stipulated herein for such material delivered on each order upon certificates signed by the Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amount to be paid on each order shall in no case exceed eighty-seven and one-half (87½) per cent of the contract price for the cable furnished on said order, the remaining twelve and one-half (12½) per cent being reserved by the said Sanitary District as part security for the faithful performance of this contract and shall not be paid until the expiration of thirty (30) days after the completion of this contract and the delivery of the final certificate of said Engineer.

Final Payment.

Art. 23. It is further agreed that the Contractor shall not be entitled to demand or receive final payment for any cable except in the manner set forth in this contract, nor until all of the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate, pay and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and as may be lawfully retained under the provisions of this contract hereinbefore set forth.

This contract shall be binding upon the legal representatives of said Contractor.

In Witness Whereof: On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be duly executed in duplicate by its duly authorized officers, to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago,
By Jas. H. Lawley,
Chairman of Its Committee on Finance.
Attest:
John McGillen, (Seal)
Clerk.

General Electric Company, (Seal)
G. E. Emmons,
Vice-President.
Attest:
M. F. Westover,
Secretary.

Approved:
G. S. Brack,
Electrical Engineer.
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men By These Presents, That we the General Electric Company, a corporation organized under the laws of the State of New York as principal and Fidelity and Deposit Company of Maryland as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of forty-eight thousand seven hundred and ninety ($48,790.00) dollars, lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 27th day of March 1919.

The Condition of the Above Obligation Is Such, That whereas the above bounden General Electric Company has entered into a certain contract with the Sanitary District of Chicago, bearing date the 27th day of March 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for furnishing lead-covered cable.

Now, If the said General Electric Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and in the time and manner therein prescribed, and, further, shall

protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments costs, damages and expenses, and attorney's fees, which may in any wise come against The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said General Electric Company, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, process, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for necessary first aid medical, surgical and hospital services and compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said General Electric Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said General Electric Company or its agents, employes or workmen in the premises, and also that any judgment or award or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, as amended by an act of the General Assembly, in force July 1, 1915, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employes, in the course of their employment, when notice of the pendency of such suit or arbitration shall have been given said General Electric Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

General Electric Company, (Seal)
By G. E. Emmons,
Vice-President.

Attest:
M. F. Westover,
Secretary.

Fidelity and Deposit Company of Maryland, (Seal)
By Arthur C. Arnold,
Attorney-in-fact.

W. H. Hansmann,
Agent.

Approved as to Form, April 16, A. D. 1919:
Charles E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance herewith transmits to the Board a grant of easement from Forrest Anderson, whereby, for the nominal consideration of $1.00 he grants to the Sani-

tary District a perpetual easement to construct by the tunnel method and to reconstruct, maintain and operate an intercepting sewer and appurtenances thereto in the Desplaines River district, in, under and through certain real estate owned by him. Said grant of easement permits the Sanitary District to transport material, equipment, excavated soil and debris across said property. The Sanitary District agrees to provide certain connections in said sewer for drainage purposes. Otherwise, said grant of easement is in the usual form used by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief Engineer and Attorney and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate said grant of easement which is hereto attached, the same having been duly executed by said Forrest Anderson.

Respectfully submitted,

JAMES H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 17, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of April payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll First Half of April, 1919.

John McGillen, Clerk (general payroll)		$ 26,763.34

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 124.02	
Illinois Central R. R. Company (labor and material for supporting and protecting I. C. R. R. tracks and maintaining traffic at 104th street account Calumet sewer crossing under)	14,595.66	
Chicago Telephone Company (labor and material removing conduits, Contract Section No. 7, Calumet sewer)	5,045.23	
Nash-Dowdle Company (work on Evanston intercepting sewer)	4,239.64	
Chicago Telephone Company (labor for rearranging pole line, Calumet sewer)	549.65	
Jas. O. Heyworth (material, temporary timber dam, Calumet-Sag)	12.65	
Hinckley & Schmitt, Inc. (drinking water)	5.52	
		24,572.37
Amount carried forward		$ 51,335.71

Amount brought forward		$ 51,335.71
Maintenance and Operation Account.		
John McGillen, Clerk (special roll, 39th street pumping station)	$ 240.00	
John McGillen, Clerk (special roll, Lawrence avenue pumping station)	153.40	
John McGillen, Clerk (freight charges paid C. & E. I., fuel Lawrence avenue pumping station)	155.60	
John McGillen, Clerk (freight charges paid I. C., fuel Lawrence avenue pumping station)	89.35	
Sheridan Sheet Metal Works (labor and material)	12.95	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Kirby Motor Trucking Co. (cartage charges)	6.36	
Geo. L. Hammons, Inc. (slash bar complete)	4.89	
Jos T. Ryerson & Son (mild steel)	1.83	
John McGillen, Clerk (freight charges paid I. C., fuel 39th street pumping station)	386.41	
John McGillen, Clerk (freight charges paid I. C., fuel 39th street pumping station)	384.63	
The Lunkenheimer Company (globe valves)	38.52	
Worthington Pump & Machinery Corporation (pipe fittings)	21.10	
Link Belt Company (sprocket wheel)	12.11	
Commonwealth Edison Company (Mazda lamps)	56.88	
Humphrey & Sons Company (pinions and gear)	22.00	
Wilbur J. Connell (scissors)	5.11	
Geo. L. Hammons, Inc. (pliers and wrench)	4.60	
Barrett Hardware Company (door mat)	2.00	
Public Service Company of Northern Illinois (gas service)	1.50	
		1,607.64
Law Department.		
John McGillen, Clerk (expenses of employe)	$ 22.44	
John McGillen, Clerk (expenses of employe)	19.17	
Burr-Vack Company (memorandum books, etc.)	27.80	
Riddle & Wunderle Company (note books, etc.)	21.05	
Geo. I. Jones (Barnes Federal Code)	8.00	
American Law Books Company (Corpus Juris, Vol. No. 17)	7.50	
Central Electric Company (Weed chains)	4.32	
		110.28
Clerical Department.		
John McGillen, Clerk (postage stamps)	$ 200.00	
The Fred J. Ringley Company (printing payroll checks)	50.00	
The Fred J. Ringley Company (printing ledger sheets)	20.00	
Burr-Vack Company (pencils, etc.)	17.00	
		287.00
Board of Trustees.		
Jas. H. Lawley, Chairman Finance Committee (expenses of Trustees from Chicago to New Orleans, etc., and return)		2,431.38
Police Department.		
John McGillen, Clerk (expenses of employes)		33.75
General Account.		
Standard Oil Company (rent of main office, etc.)	$ 2,644.54	
Fred Klein Company (printing Proceedings, etc.)	398.75	
Standard Oil Company (plastering and calcimining, etc.)	41.28	
Parker's Towel Supply Company (towel service)	26.00	
Burr-Vack Company (books, etc.)	25.00	
Fred Klein Company (printing Proceedings)	20.00	
Walger Awning Company (recover awning, etc.)	11.15	
20th Century Press Clipping Bureau	4.00	
		3,170.72
Amount carried forward		$ 58,976.48

Amount brought forward		$ 58,976.48

Electrical Department.

John McGillen, Clerk (regular payroll, first half of April)	$ 16,773.87	
John McGillen, Clerk (expenses of employe)	28.56	
The Kellogg Mackay Company (pipe fittings)	316.62	
General Electric Company (brass washers, etc.)	291.15	
General Electric Company (motor starting switches, etc.)	252.40	
Wm. Heggie (rails and splice bars)	225.00	
Naugle Pole & Tie Company (cedar poles)	214.95	
Monarch Electric & Wire Company (coils, etc.)	203.45	
Monarch Electric & Wire Company (coils, etc.)	181.94	
Monarch Electric & Wire Company (magnet wire, etc.)	173.43	
Simplex Wire & Cable Company (simcore, D. B.)	126.61	
The Kellogg-Mackay Company (black pipe couplings)	130.66	
John Naghten & Co. (insurance)	130.05	
Chicago Brass Works (bronze rings)	110.00	
Union Petroleum Company (gasoline)	102.71	
Overland Motor Company (transmission shaft, etc.)	95.28	
Gibbons Bros. (repairing tubes and valves)	87.05	
Belden Mfg. Company (wire)	84.17	
Commonwealth Edison Company (connectors)	76.44	
Wilbur J. Connell (lag screws, etc.)	73.00	
Commonwealth Edison Company (insulators)	69.38	
Auto Radiator Mfg. Company (new core in radiator and repairing Ford radiator)	65.25	
Chicago Telephone Company (telephone service)	63.71	
Norris Ward Coal Company (coal for heating garage at 31st street)	58.04	
Northern Rubber Company (casings and inner tubes)	54.45	
Stebbins Hardware Company (bolt clippers, etc.)	53.34	
Crocker-Wheeler Company (brush holders)	50.00	
General Electric Company (waxed sheets, demand indicator)	45.00	
L. L. Fleig & Co. (linen tape, etc.)	44.85	
The Kellogg-Mackay Company (floor flanges, etc.)	42.90	
Stebbins Hardware Company (varnish brushes, etc.)	40.26	
Norris Ward Coal Company (coal)	40.00	
American Supply Company (sanitary wipers)	29.28	
The White Company (bearing, casting and gaskets, etc.)	39.33	
The Kellogg-Mackay Company (clamp tees)	38.25	
Monarch Electric & Wire Company (solid wire, etc.)	37.81	
Western Slate Company (slate)	36.64	
National Fibre & Insulation Company (fibre tubing)	35.91	
Riddle & Wunderle Company (gem clips, etc.)	35.90	
Westinghouse Electric & Mfg. Company (current and pressure coil)	35.71	
Western Electric Company (wood conduit plugs)	35.00	
Wilbur J. Connell (expansion bolts, etc.)	33.77	
Wm. F. Klemp (castings)	30.00	
Henry M. Joda (setting smokestack for heater)	29.53	
Consumers Company (ice)	27.77	
Burr-Vack Company (blank cards, etc.)	26.40	
R. Hanisch Sons Company (Badger jacks, etc.)	25.52	
Nelson & Le Moon (axle shaft)	24.68	
Modern Auto Repair Shop (piston rings)	22.50	
Fuller-Morrison Company (sal soda)	20.10	
Barrett Hardware Company (spikes, etc.)	18.75	
Western Electric Company (conduit locknuts and bushings)	18.24	
Scully Steel & Iron Company (round steel)	18.00	
M. W. Powell (asphalt compound)	17.40	
Amounts carried forward	$ 20,941.01	$ 58,976.48

Amounts brought forward	$ 20,941.01	$ 58,976.48
Wm. Heggie (repairing link of engine, etc.)	13.80	
Jas. Carmichael (copper float and stem, etc.)	15.55	
Burr-Vack Company (cabinet)	15.48	
Jos. T. Ryerson & Son (bars and angles)	15.04	
Automotive Electric Service Corporation (rubber hose)	15.00	
The Lord & Bushnell Company (lumber)	14.89	
National Fibre & Insulation Company (hard gray fibre)	12.75	
Garden City Spring Works (replacing broken spring)	12.50	
Nagel Bros. (coal)	12.05	
Joliet Transfer Company (cartage charges)	12.00	
Geo. L. Hammons, Inc. (emery cloth)	12.00	
Jos. H. Kirk Company (barrels with heads)	12.00	
Bentley, Murray & Co. (report blanks)	11.50	
L. L. Fleig & Co., Inc. (black friction tape)	11.48	
Jos. T. Ryerson & Son (channels)	10.62	
Henry Stuckart (cement finishing trowel)	10.00	
Consumers Company (ice)	9.46	
Overland Motor Company (shifting fork coupling, etc.)	9.27	
H. M. Hooker Glass & Paint Company (sperm oil)	9.07	
Central Electric Company (Weed chains)	8.05	
Geo. L. Hammons, Inc. (gauge glasses)	6.72	
S. & L. Motor Company (shacker bolts, etc.)	6.16	
Jos. T. Ryerson & Son (steel welding rod)	5.89	
Central Electric Company (shock absorbers, etc.)	5.65	
The Wm. D. Gibson Company (springs)	5.27	
Pittsburgh, Cincinnati, Chicago & St. Louis R. R. (rental)	5.00	
Chicago Surface Lines (rental for pole space)	5.00	
Geo. L. Hammons, Inc. (bronze)	4.53	
American Blue Print Paper Company (felt pad for frame)	4.06	
Truax Company (rubber respirators)	3.80	
Riddle & Wunderle Company (transfer cases, etc.)	2.33	
Patterson & Schroeder Supply Company (S. S. drill)	2.21	
Jones & Laughlin Steel Company (channel)	1.88	
Geo. L. Hammons, Inc. (repairs to pipe vise, etc.)	1.24	
Barrett Christie Company (Trimo wrench, etc.)	.76	
		21,244.02

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 86.68		
Maintenance and Operation Account	56.35		
		$ 143.03	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 84.75		
Maintenance and Operation Account	35.18		
General Account	19.16		
		139.09	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 28.06		
Maintenance and Operation Account	16.52		
		44.58	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 38.12		
Maintenance and Operation Account	1.50		
		39.62	
John McGillen, Clerk (expenses of employe)—			
Maintenance and Operation Account	$ 2.05		
General Account	7.92		
Electrical Department	7.65		
		17.62	
Amounts carried forward		$ 383.94	$ 80,220.50

Amounts brought forward		$ 383.94	$ 80,220.50
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 9.95		
Law Department	6.05		
Clerical Department	3.15		
Police Department	.10		
General Account	222.15		
Electrical Department	2.85		
		244.25	
			628.19
Grand Total			$ 80,848.69

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
CHAS. H. SERGEL,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it is necessary to have two offices for the field party now employed on the Desplaines River intercepting sewer and the Desplaines River sewage treatment works to be located near the north end of said sewer in Maywood and the other at the site of said works.

He further states that the Sanitary District owns two sheet iron offices, now located in Maywood, which can be mounted on skids and moved to the sites designated above and he requests that he be authorized to have said work performed at a cost of approximately $250.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to have performed the work above specified provided the cost of the same shall not exceed the sum of $250.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the Board on April 10, 1919, (page 318 of the Proceedings) approved the specifications and drawings for a conduit line from 56th street and Western avenue to the Calumet Sewage Pumping Station and directed the Clerk to advertise for bids for the work to be performed in accordance with said specifications and drawings.

Your Committee on Engineering further reports that it has received a communication from the Electrical Engineer, in which he states that since said specifications and drawings were prepared he has been informed by the Department of Gas and Electricity of the City of Chicago, that said city proposes to install a conduit line in 103rd street, from Wood to Halsted streets, and that satisfactory arrangements might be made whereby the Sanitary District could use two ducts of said conduit line and be relieved from building about 6,600 feet of conduit in 103rd street.

He further states that the City of Chicago has planned to build a duct line from its substation at 103rd street and Halsted street to 120th street and Wentworth avenue and the Sanitary District, by changing the route of its proposed conduit line to conform to the new route of said city and building a line jointly with the City of Chicago could save a large sum of money and he recommends that the present specifications be changed to provide only for a conduit line from 56th street and Western avenue to 103rd and Wood streets.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the report of the Committee on Engineering adopted by the Board on April 10, 1919, be and the same is hereby amended by substituting in the first paragraph thereof, for the words "for a conduit line from 56th street and Western avenue to the Calumet Sewage Pumping Station," the words "for a conduit line from 56th street and Western avenue to 103rd and Wood streets.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that about six hundred (600) feet of curbing on Prairie avenue south of 119th street, has settled to such an extent that it is necessary to reset the same at the proper elevation in order to leave said street in a good condition, and he requests that he be authorized to have said work performed at an estimated cost of $300.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to have the work above specified per-

formed, provided the cost of the same shall not exceed the sum of $300.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary to remove and replace a portion of the concrete curb and gutter along the east side of First avenue, just north of Madison street, in Maywood, in order to provide a manhole and sewer connection for the Desplaines River intercepting sewer.

He further states that said curb and gutter were built by the Village of Maywood after Nash Brothers entered into its contract dated July 8, 1918 (page 802 of the Proceedings) with the Sanitary District for the construction of said sewer and said work is not covered by the specifications therefor and he requests that he be authorized to order Nash Bros. to perform said work under the extra work clause of its contract, at an estimated cost of $50.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized to order Nash Bros. to perform the work above specified under the extra work clause of said contract, provided the cost of the same shall not exceed the sum of $50.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman

H. E. LITTLER,
PATRICK J. CARR,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the Chief Engineer has prepared specifications and plans for the pumping and pipework on the Calumet Sewage Pumping Station and the Evanston Sewage Pumping Station, which have been presented to your Committee for approval.

Your Committee further reports that it has considered said specifications and plans and has approved the same and therefore recommends the passage of the following order:

Ordered, That the specifications and plans prepared by the Chief Engineer for the work above specified be and the same are hereby approved, and be it further

Ordered, That the Clerk be, and he is

hereby authorized and directed to advertise for bids for the performance of said work, in accordance with the specifications and plans so prepared by the Chief Engineer.

Respectfully submitted,
WALLACE G. CLARK,
Chairman

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer, in which he states that it is necessary to furnish and install two extra metal doors with steel frames, the necessary cut stone for lintels and sills and appurtenances thereto for the Calumet Pumping Station. He further states that said work was not specified in the plans for the construction of said pumping station, but the Building Commissioner of the City of Chicago refuses to approve said plans and issue a permit to construct said station until said work is specified and he requests that he may be authorized to order the T. J. Forschner Contracting Company to perform said work under the extra work clause of its contract at a cost not to exceed $350.00.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to order the T. J. Forschner Contracting Company to perform the work above specified under the extra work clause of said contract, provided the cost of the same shall not exceed the the sum of $350.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs, Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN —Your Committee on Electrical Development herewith presents a renewal of contract with the Beverly Country Club, 87th and Western avenue, wherein said Beverly Country Club agrees to take and the Sanitary District agrees to furnish electrical energy for the time and upon the terms and conditions set forth in said contract, which contract has been approved by the Electrical Engineer.

Your Committee, having considered

said contract recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the attached contract which has been properly executed by said Beverly Country Club.

Respectfully submitted,
H. E. LITTLER,
Chairman.
WM. J. HEALY,
MATT A. MUELLER,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, April 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer, transmitting an application from the Chairman of Decorations of the Architects Committee for the War Loan Organization for electrical energy for decorative lighting east of Michigan avenue, from Randolph to Twelfth streets, during the Victory Loan Drive from April 25th to May 10th, 1919.

The Electrical Engineer further states that the Sanitary District is now supplying service to the Kahki and Blue Club from a transformer, which was installed at Van Buren street, east of the Illinois Central Railroad tracks, from which service for said lighting could be supplied, and that if service was supplied said organization would have to make all extensions and pay all expenses of installation.

Your Committee having considered said matter is of the opinion that said service should be furnished upon the terms set forth in the communication of the Electrical Engineer above referred to at three quarters of a cent per kilowatt hour, which is the rate paid for service by said Khaki and Blue Club, and, therefore, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to enter into a contract with said War Loan Organization to furnish it with electrical service at the rate of three quarters of a cent per kilowatt hour, providing said organization makes all extensions and pays all expenses of installation.

Respectfully submitted,
H. E. LITTLER,
Chairman.
WM. J. HEALY,
MATT A. MUELLER,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk

28,05773
C43s

JUN 6 - 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, APRIL 24, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Lawley, Littler, Mueller and Nance—Seven.

Absent—Messrs. Healy and Paullin—Two.

BIDS.

The Clerk opened and read the bids received for furnishing and delivering timber for trestles at the Grand Trunk Western Railway Company's bridge over the Calumet-Sag Channel, as shown in the schedule appearing on page 351-A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

The Clerk opened and read the bids received for furnishing, delivering and installing sewage treatment plant, pumping, electrical and miscellaneous equipment for the Des Plaines River Sewage Treatment Works, as shown in the

schedule appearing on pages 352A and 352 of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

THE SANITARY DISTRICT OF CHICAGO—DESPLAINES RIVER SEWAGE TREATMENT WORKS, APRIL 24, 1919.

DIVISION A—SEWAGE TREATMENT PLANT—	
Leyden-Ortseifen Company	$384,281.25
James O. Heyworth	386,533.00
John W. Page	404,834.00
Paschen Brothers	414,958.50
C. E. Carson Company	431,561.75
Warner Construction Company	446,419.00
Hoeffer & Company	450,817.50
Nash Brothers ***	539,357.75
T. J. Forschner Contracting Company	550,523.00
ALL DIVISIONS—A, C, N, O, P, R, V, W—BID ON ALL—	
John W. Page	489,044.20
SUM OF LOW BIDS EACH DIVISION	464,611.25
OTHER COMBINATION BIDS—DIVISIONS A, C, N, O, P, R, V—	
Nash Brothers	618,685.75
Combination of low, corresponding	451,851.25
DIVISIONS A, C, N, O, R, V—	
Paschen Brothers	485,758.50
Combination of low, corresponding	429,056.25
DIVISIONS A, C, N, O, V—	
C. E. Carson Company	461,961.75
Combination of low, corresponding	406,681.25

THE SANITARY DISTRICT OF CHICAGO—DESPLAINES RIVER SEWAGE TREATMENT WORKS, APRIL 24, 1919.

	Per Pound	Total
DIVISION C—STRUCTURAL STEEL—120,000 POUNDS—		
Milwaukee Bridge Company	4 cents	$ 4,800.00
Kenwood Bridge Company	4 cents*	4,800.00
Gage Structural Steel Company	4.25 cents	5,100.00
Hansell-Elcock Company	4.45 cents	5,340.00
Wm. Horn Structural Iron Works	4.49 cents	5,388.00
DIVISION N—TRAVELING CRANE—LUMP SUM—		
Bedford Foundry & Machine Company**		2,300.00
Whiting Foundry Equipment Company		3,335.00
DIVISION O—PUMPING MACHINERY—LUMP SUM—		
E. E. Maher		9,050.00
Kling Bros. Engineering Works		11,924.00
DIVISION P—ELECTRICAL EQUIPMENT—LUMP SUM—		
W. A. Jackson Company		22,375.00
DIVISION R—BLOWERS—LUMP SUM—		
Standard Power Equipment Company		22,795.00
DIVISION V—SLUICE GATES—LUMP SUM—		
Coffin Valve Company		6,250.00
Chapman Valve Manufacturing Company		6,400.00
DIVISION W—VENTURI METERS—LUMP SUM—		
Builders' Iron Foundry		12,760.00

* Kenwood Bridge Company. Clerical error in writing the price: $4.00 written in dollar space conflicting with figures which give 4 cents per pound.

** Bedford Foundry & Machine Company. Furnished no affidavit or information.

*** Bid made only as part of entirety, comprising Divisions A, C, N, O, P, R and V.

351-A

SANITARY DISTRICT OF CHI
SHING AND DELIVERING T
D.'S BRIDGE OVER CALUMET
IN BLUE ISLAND, ILL.
Bids Opened April 24, 1919.

Item F 0 Sway Braces 3"x12"x24' long 5,760 Ft. B. M.		Item G 60 Guard Tim 4"x6"x20' l 2,400 Ft. B.		Item F 80 Sway Braces 3"x12"x24' long 5,760 Ft. B. M.		Item G 60 Guard Timbers 4"x6"x20' long 2,400 Ft. B. M.		Grand Total
Price per 1000 . B. M.	Total	Price per 1000 Ft. B. M.	T	Price per 1000 t. B. M.	Total	Price per 1000 Ft. B. M.	Total	
$44.00	$253.44	$44.00	$1	....	.....	....	.....	.....
52.00	299.52	....		$63.00	$362.88	$55.00	$132.00	$7,666.50
52.00	299.52	52.00		57.00	328.32	50.00	120.00	7,064.93
55.00	316.80	55.00		....	.....	....	.....	.....

April 24, 351-A 1919

THE SANITARY DISTRICT OF CHICAGO.

PROPOSALS FOR FURNISHING AND DELIVERING TIMBER FOR TRESTLES AT G. T. W. RY. CO'S BRIDGE OVER CALUMET-SAG CHANNEL IN BLUE ISLAND, ILL.

Bids Opened April 24, 1919.

| In Order Received | In Order of Magnitude | NAMES AND ADDRESSES OF BIDDERS | | Amount of Deposit | OREGON FIR TIMBER | | | | | | | | | | | | | | YELLOW PINE TIMBER | | | | | | | | | | | | | |

THE SANITARY DISTRICT OF CHICAGO.

TABULATION OF BIDS RECEIVED FOR DESPLAINES RIVER SEWAGE TREATMENT WORKS.

APRIL 24, 1919.

Item	DIVISION A — DESCRIPTION OF ITEM	Estimated Quantities	1 Nash Brothers Chicago — Divisions A C, N, O, P, R & V as Entirety		2 T. J. Forschner Contracting Co. Chicago — Division A		3 John W. Page Chicago — Division A Divisions A, C, N, O, P, R, V and W as Entirety		4 Hoeffer & Company Chicago — Division A		5 Paschen Brothers Chicago — Divisions A, C, N, O, R and V		6 Leyden-Ortseifen Company Chicago — Division A		7 Jas. O. Heyworth Chicago — Division A		8 C. E. Carson Co. Chicago — Division A Divisions A, C, N, O and V as Entirety		9 Warner Construction Company Chicago — Division A	
1	Earth Excavation	35,000 cu. yds.	$ 3.85	$134,750.00	$ 4.00	$140,000.00	$ 2.49	$ 87,150.00	$ 2.90	$101,500.00	$ 2.10	$ 73,500.00	$ 2.20	$ 77,000.00	$ 2.00	$ 70,000.00	$ 2.85	$ 99,750.00	$ 1.85	$ 64,750.00
2	Rock Excavation	1 cu. yd.	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
3	Macadam Pavement	5,000 sq. yds.	4.00	20,000.00	2.70	13,500.00	1.78	8,900.00	3.00	15,000.00	2.60	13,000.00	2.85	14,250.00	2.00	10,000.00	3.00	15,000.00	4.57	22,850.00
4	Stone Walks	500 sq. yds.	1.75	875.00	1.60	800.00	.70	350.00	2.00	1,000.00	1.85	925.00	2.00	1,000.00	1.25	625.00	2.25	1,125.00	2.05	1,025.00
5	Concrete, Class A	1,200 cu. yds.	21.00	25,200.00	20.50	24,600.00	18.00	21,600.00	17.50	21,000.00	14.00	16,800.00	16.00	19,200.00	17.00	20,400.00	17.62	21,144.00	18.80	22,560.00
6	Concrete, Class B	5,800 cu. yds.	20.00	116,000.00	20.50	118,900.00	17.75	102,950.00	16.40	95,120.00	15.00	87,000.00	16.00	92,800.00	15.15	87,870.00	14.45	83,810.00	17.90	103,820.00
7	Concrete, Class C	200 cu. yds.	19.00	3,800.00	18.00	3,600.00	14.10	2,820.00	14.50	2,900.00	11.00	2,200.00	15.00	3,000.00	13.00	2,600.00	12.83	2,566.00	17.00	3,400.00
8	Reinforcing Steel	600,000 pounds	.08¾	52,500.00	.11	6,600.00	.06	36,000.00	.06	36,000.00	.04½	27,000.00	.04¾	28,500.00	.06	36,000.00	.05	30,000.00	5.45 cts.	32,700.00
9	Miscellaneous Steel	15,000 pounds	.15	2,250.00	.15	2,250.00	.10	1,500.00	.10	1,500.00	.15	2,250.00	.12	1,800.00	.12	1,800.00	.12	1,800.00	.15	2,250.00
10	Iron Castings	35,000 pounds	.12	4,200.00	.14	4,900.00	.10	3,500.00	.08	2,800.00	.09	3,150.00	.09	3,150.00	.12	4,200.00	.11	3,850.00	.08	2,800.00
11	6-inch Water Pipe	2,300 lin. ft.	4.50	10,350.00	3.25	7,475.00	2.50	5,750.00	3.70	8,510.00	2.86	6,578.00	2.84	6,532.00	2.75	6,325.00	2.85	6,555.00	2.87	6,601.00
12	Cast Iron Pipe	80,000 pounds	.08	6,400.00	.10	8,000.00	.05¾	4,600.00	.11	8,800.00	.12	9,600.00	.11½	9,200.00	.05	4,000.00	.08	6,400.00	.09	7,200.00
13	Tile Pipe, 8-inch	650 lin. ft.	2.50	1,625.00	1.60	1,040.00	1.40	910.00	1.21	786.50	2.00	1,300.00	2.88	1,872.00	1.00	650.00	2.25	1,462.50	2.10	1,365.00
14	Tile Pipe, 12-inch	1,200 lin. ft.	4.00	4,800.00	3.00	3,600.00	2.00	2,400.00	1.80	2,160.00	2.30	2,760.00	2.95	3,540.00	1.50	1,800.00	2.50	3,000.00	2.20	2,640.00
15	Tile Pipe, 30-inch	275 lin. ft.	7.25	1,993.75	7.00	1,925.00	4.40	1,210.00	9.68	2,662.00	6.90	1,897.50	7.47	2,054.25	6.00	1,650.00	6.75	1,856.25	6.00	1,650.00
16	Tile Underdrains	2,000 lin. ft.	2.75	5,500.00	1.30	2,600.00	.60	1,200.00	.61	1,220.00	.90	1,800.00	.80	1,600.00	.90	1,800.00	1.00	2,000.00	.96	1,920.00
17	Pump and Blower House Substructure	Lump sum	....	20,000.00	....	20,500.00	....	20,460.00	....	20,460.00	....	23,000.00	....	9,200.00	....	15,000.00	....	23,000.00	....	26,300.00
18	Tank Equipment	Lump sum	....	53,546.00	....	40,000.00	....	36,757.00	....	59,486.00	....	36,000.00	....	34,000.00	....	40,000.00	....	38,000.00	....	37,500.00
19	Air Piping	Lump sum	....	29,850.00	....	35,000.00	....	31,865.00	....	20,500.00	....	42,000.00	....	37,500.00	....	38,000.00	....	35,000.00	....	36,700.00
20	Supply, Effluent and Drain Piping	Lump sum	....	29,000.00	....	35,000.00	....	24,599.00	....	20,400.00	....	42,500.00	....	30,700.00	....	32,000.00	....	41,000.00	....	41,500.00
21	Erection of Equipment	Lump sum	....	12,350.00	....	17,000.00	....	7,000.00	....	24,290.00	....	17,000.00	....	4,000.00	....	7,500.00	....	10,000.00	....	21,750.00
22	Sheeting	3 M Feet, B. M.	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00
23	Sand Fill	250 cu. yds.	3.50	875.00	3.00	750.00	3.50	875.00	2.50	625.00	4.00	1,000.00	3.00	750.00	3.00	750.00	3.00	750.00	3.00	750.00
24	Inlet Basins	25	50.00	1,250.00	25.00	625.00	25.00	625.00	100.00	2,500.00	41.00	1,025.00	50.00	1,250.00	70.00	1,750.00	50.00	1,250.00	103.00	2,575.00
25	Galvanizing Cast-Iron Pipe	43,000 pounds	.05	2,150.00	.05½	2,365.00	.04	1,720.00	.03½	1,505.00	.06	2,580.00	.03	1,290.00	.04	1,720.00	.05	2,150.00	.04	1,720.00
	Total for Division A			$539,357.75		$550,523.00		404,834.00		$450,817.50		$414,958.50		$384,281.25		$386,533.00		$431,561.75		446,419.00
	DIVISION C—Structural Steel	120,000 pounds	$0.05	$ 6,000.00	.....	.....	4.396 cts.	5,275.20	.....	.....	$0.08½	10,200.00	.....	.....	.....	.....	$0.05½	$ 6,600.00	.....	.....
	DIVISION N—Traveling Crane	Lump sum		5,000.00	.....	.....		3,500.00	.....	.....		5,600.00	.....	.....	.....	.....		4,300.00	.....	.....
	DIVISION O—Pumping Machinery	Lump sum		13,898.00	.....	.....		10,000.00	.....	.....		15,000.00	.....	.....	.....	.....		12,000.00	.....	.....
	DIVISION P—Electrical Equipment	Lump sum		22,430.00	.....	.....		22,500.00	.....	.....		.....	.....	.....	.....	.....		.....	.....	.....
	DIVISION R—Blowers	Lump sum		25,000.00	.....	.....		22,795.00	.....	.....		30,000.00	.....	.....	.....	.....		.....	.....	.....
	DIVISION V—Sluice Gates	Lump sum		7,000.00	.....	.....		6,700.00	.....	.....		10,000.00	.....	.....	.....	.....		7,500.00	.....	.....
	DIVISION W—Venturi Meters	Lump sum		.....	.....	.....		13,440.00	.....	.....		.....	.....	.....	.....	.....		.....	.....	.....
	GRAND TOTAL—All Divisions Bid			$618,685.75	.....	.....		$489,044.20	.....	.....		$485,758.50	.....	.....	.....	.....		$461,961.75	.....	.....

Item	6 len-Ortseifen Company Chicago Division A		7 Jas. O. Heyworth Chicago Division A		8 C. E. Carson Co. Chicago Division A Divisions A, C, N, O and V as Entirety		9 Warner Construction Company Chicago Division A	
1	0	$ 77,000.00	$ 2.00	$ 70,000.00	$ 2.85	$ 99,750.00	$ 1.85	$ 64,750.00
2	0	3.00	3.00	3.00	3.00	3.00	3.00	3.00
3	5	14,250.00	2.00	10,000.00	3.00	15,000.00	4.57	22,850.00
4	0	1,000.00	1.25	625.00	2.25	1,125.00	2.05	1,025.00
5	0	19,200.00	17.00	20,400.00	17.62	21,144.00	18.80	22,560.00
6	0	92,800.00	15.15	87,870.00	14.45	83,810.00	17.90	103,820.00
7	0	3,000.00	13.00	2,600.00	12.83	2,566.00	17.00	3,400.00
8	4½	28,500.00	.06	36,000.00	.05	30,000.00	5.45 cts.	32,700.00
9	2	1,800.00	.12	1,800.00	.12	1,800.00	.15	2,250.00
10	9	3,150.00	.12	4,200.00	.11	3,850.00	.08	2,800.00
11	4	6,532.00	2.75	6,325.00	2.85	6,555.00	2.87	6,601.00
12	1½	9,200.00	.05	4,000.00	.08	6,400.00	.09	7,200.00
13	8	1,872.00	1.00	650.00	2.25	1,462.50	2.10	1,365.00
14	5	3,540.00	1.50	1,800.00	2.50	3,000.00	2.20	2,640.00
15	7	2,054.25	6.00	1,650.00	6.75	1,856.25	6.00	1,650.00
16	0	1,600.00	.90	1,800.00	1.00	2,000.00	.96	1,920.00
17		9,200.00	....	15,000.00	....	23,000.00	....	26,300.00
18		34,000.00	....	40,000.00	....	38,000.00	....	37,500.00
19		37,500.00	....	38,000.00	....	35,000.00	....	36,700.00
20		30,700.00	....	32,000.00	....	41,000.00	....	41,500.00
21		4,000.00	....	7,500.00	....	10,000.00	....	21,750.00
22	0	90.00	30.00	90.00	30.00	90.00	30.00	90.00
23	0	750.00	3.00	750.00	3.00	750.00	3.00	750.00
24	0	1,250.00	70.00	1,750.00	50.00	1,250.00	103.00	2,575.00
25	3	1,290.00	.04	1,720.00	.05	2,150.00	.04	1,720.00
		$384,281.25		$386,533.00		$431,561.75		446,419.00
DIVISI		.....		.....	$0.05½	$ 6,600.00		.....
DIVISI		.....		.....		4,300.00		.....
DIVISI		.....		.....		12,000.00		.....
DIVISI		.....		.....		.....		.....
DIVISI		.....		.....		.....		.....
DIVISI		.....		.....		7,500.00		.....
		.....		.....		.....		.....
		.....		.....		$461,961.75		.....

THE SANITARY DISTRICT OF CHICAGO.

TABULATION OF BIDS RECEIVED FOR DESPLAINES RIVER SEWAGE TREATMENT WORKS.

APRIL 24, 1919.

Item	DIVISION A — DESCRIPTION OF ITEM	Estimated Quantities	1 Nash Brothers Chicago		2 T. J. Forschner Contracting Co. Chicago		3 John W. Page Chicago		4 Hoeffer & Company Chicago		5 Paschen Brothers Chicago		6 Leyden-Ortseifen Company Chicago		7 Jas. O. Heyworth Chicago		8 C. E. Carson Co. Chicago		9 Warner Construction Company Chicago	
			Divisions A C, N, O, P, R & V as Entirety		Division A		Division A Divisions A, C, N, O, P, R, V and W as Entirety		Division A		Divisions A, C, N, O, R and V		Division A		Division A		Division A Divisions A, C, N, O and V as Entirety		Division A	
1	Earth Excavation	35,000 cu. yds.	$ 3.85	$134,750.00	$ 4.00	$140,000.00	$ 2.49	$ 87,150.00	$ 2.90	$101,500.00	$ 2.10	$ 73,500.00	$ 2.20	$ 77,000.00	$ 2.00	$ 70,000.00	$ 2.85	$ 99,750.00	$ 1.85	$ 64,750.00
2	Rock Excavation	1 cu. yd.	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
3	Macadam Pavement	5,000 sq. yds.	4.00	20,000.00	2.70	13,500.00	1.78	8,900.00	3.00	15,000.00	2.60	13,000.00	2.85	14,250.00	2.00	10,000.00	3.00	15,000.00	4.57	22,850.00
4	Stone Walks	500 sq. yds.	1.75	875.00	1.60	800.00	.70	350.00	2.00	1,000.00	1.85	925.00	2.00	1,000.00	1.25	625.00	2.25	1,125.00	2.05	1,025.00
5	Concrete, Class A	1,200 cu. yds.	21.00	25,200.00	20.50	24,600.00	18.00	21,600.00	17.50	21,000.00	14.00	16,800.00	16.00	19,200.00	17.00	20,400.00	17.62	21,144.00	18.80	22,560.00
6	Concrete, Class B	5,800 cu. yds.	20.00	116,000.00	20.50	118,900.00	17.75	102,950.00	16.40	95,120.00	15.00	87,000.00	16.00	92,800.00	15.15	87,870.00	14.45	83,810.00	17.90	103,820.00
7	Concrete, Class C	200 cu. yds.	19.00	3,800.00	18.00	3,600.00	14.10	2,820.00	14.50	2,900.00	11.00	2,200.00	15.00	3,000.00	13.00	2,600.00	12.83	2,566.00	17.00	3,400.00
8	Reinforcing Steel	600,000 pounds	.08¾	52,500.00	.11	6,600.00	.06	36,000.00	.06	36,000.00	.04½	27,000.00	.04¾	28,500.00	.06	36,000.00	.05	30,000.00	5.45 cts.	32,700.00
9	Miscellaneous Steel	15,000 pounds	.15	2,250.00	.15	2,250.00	.10	1,500.00	.10	1,500.00	.15	2,250.00	.12	1,800.00	.12	1,800.00	.12	1,800.00	.15	2,250.00
10	Iron Castings	35,000 pounds	.12	4,200.00	.14	4,900.00	.10	3,500.00	.08	2,800.00	.09	3,150.00	.09	3,150.00	.12	4,200.00	.11	3,850.00	.08	2,800.00
11	6-inch Water Pipe	2,300 lin. ft.	4.50	10,350.00	3.25	7,475.00	2.50	5,750.00	3.70	8,510.00	2.86	6,578.00	2.84	6,532.00	2.75	6,325.00	2.85	6,555.00	2.87	6,601.00
12	Cast Iron Pipe	80,000 pounds	.08	6,400.00	.10	8,000.00	.05¾	4,600.00	.11	8,800.00	.12	9,600.00	.11½	9,200.00	.05	4,000.00	.08	6,400.00	.09	7,200.00
13	Tile Pipe, 8-inch	650 lin. ft.	2.50	1,625.00	1.60	1,040.00	1.40	910.00	1.21	786.50	2.00	1,300.00	2.88	1,872.00	1.00	650.00	2.25	1,462.50	2.10	1,365.00
14	Tile Pipe, 12-inch	1,200 lin. ft.	4.00	4,800.00	3.00	3,600.00	2.00	2,400.00	1.80	2,160.00	2.30	2,760.00	2.95	3,540.00	1.50	1,800.00	2.50	3,000.00	2.20	2,640.00
15	Tile Pipe, 30-inch	275 lin. ft.	7.25	1,993.75	7.00	1,925.00	4.40	1,210.00	9.68	2,662.00	6.90	1,897.50	7.47	2,054.25	6.00	1,650.00	6.75	1,856.25	6.00	1,650.00
16	Tile Underdrains	2,000 lin. ft.	2.75	5,500.00	1.30	2,600.00	.60	1,200.00	.61	1,220.00	.90	1,800.00	.80	1,600.00	.90	1,800.00	1.00	2,000.00	.96	1,920.00
17	Pump and Blower House Substructure	Lump sum	....	20,000.00	....	20,500.00	....	20,460.00	....	20,460.00	....	23,000.00	....	9,200.00	....	15,000.00	....	23,000.00	....	26,300.00
18	Tank Equipment	Lump sum	....	53,546.00	....	40,000.00	....	36,757.00	....	59,486.00	....	36,000.00	....	34,000.00	....	40,000.00	....	38,000.00	....	37,500.00
19	Air Piping	Lump sum	....	29,850.00	....	35,000.00	....	31,865.00	....	20,500.00	....	42,000.00	....	37,500.00	....	38,000.00	....	35,000.00	....	36,700.00
20	Supply, Effluent and Drain Piping	Lump sum	....	29,000.00	....	35,000.00	....	24,599.00	....	20,400.00	....	42,500.00	....	30,700.00	....	32,000.00	....	41,000.00	....	41,500.00
21	Erection of Equipment	Lump sum	....	12,350.00	....	17,000.00	...	7,000.00	....	24,290.00	....	17,000.00	....	4,000.00	....	7,500.00	....	10,000.00	....	21,750.00
22	Sheeting	3 M Feet, B. M.	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00	30.00	90.00
23	Sand Fill	250 cu. yds.	3.50	875.00	3.00	750.00	3.50	875.00	2.50	625.00	4.00	1,000.00	3.00	750.00	3.00	750.00	3.00	750.00	3.00	750.00
24	Inlet Basins	25	50.00	1,250.00	25.00	625.00	25.00	625.00	100.00	2,500.00	41.00	1,025.00	50.00	1,250.00	70.00	1,750.00	50.00	1,250.00	103.00	2,575.00
25	Galvanizing Cast-Iron Pipe	43,000 pounds	.05	2,150.00	.05½	2,365.00	.04	1,720.00	.03½	1,505.00	.06	2,580.00	.03	1,290.00	.04	1,720.00	.05	2,150.00	.04	1,720.00
	Total for Division A			$539,357.75		$550,523.00		404,834.00		$450,817.50		$414,958.50		$384,281.25		$386,533.00		$431,561.75		446,419.00
	DIVISION C—Structural Steel	120,000 pounds	$0.05	$ 6,000.00	.....	.....	4.396 cts.	5,275.20	.....	.....	$0.08½	10,200.00	.....	.....	.....	.....	$0.05¼	$ 6,600.00	.....	.....
	DIVISION N—Traveling Crane	Lump sum		5,000.00	.....	.....		3,500.00	.....	.....		5,600.00	.....	.....	.....	.....		4,300.00	.....	.....
	DIVISION O—Pumping Machinery	Lump sum		13,898.00	.....	.....		10,000.00	.....	.....		15,000.00	.....	.....	.....	.....		12,000.00	.....	.....
	DIVISION P—Electrical Equipment	Lump sum		22,430.00	.....	.....		22,500.00	.....	.....		.....	.....	.....	.....	.....		.....	.....	.....
	DIVISION R—Blowers	Lump sum		25,000.00	.....	.....		22,795.00	.....	.....		30,000.00	.....	.....	.....	.....		.....	.....	.....
	DIVISION V—Sluice Gates	Lump sum		7,000.90	.....	.....		6,700.00	.....	.....		10,000.00	.....	.....	.....	.....		7,500.00	.....	.....
	DIVISION W—Venturi Meters	Lump sum		.....	.....	.....		13,440.00	.....	.....		.....	.....	.....	.....	.....		.....	.....	.....
	GRAND TOTAL—All Divisions Bid			$618,685.75	.....	.....		$489,044.20	.....	.....		$485,758.50	.....	.....	.....	.....		$461,961.75	.....	.....

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of March, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR MARCH, 1919.

Balance on hand at date of last report.....$ 1,000,809.36

Receipts.

Electrical Department (working capital).....	$ 64,963.52	
Great Lakes Dredge & Dock Company.....	7,436.18	
Collector, Town of Niles.....	3,302.29	
Water Service	1,570.00	
Western Quarries Company.....	1,404.94	
Collector, Town of Norwood Park.....	934.73	
Bills Receivable (United States Crushed Stone Company)	333.33	
Land Revenue	150.00	
Interest on Bank Balance, Geo. M. Reynolds, Treasurer..	1,321.21	
Total cash received for month.....		81,416.20
		$ 1,082,225.56

Expenditures.

Clerical Department	$ 2,939.54	
Law Department	11,914.28	
Electrical Department	74,812.23	
Treasury Department	244.33	
Police Department	5,616.79	
General Account	13,218.21	
Maintenance Account	26,270.40	
Construction Account	102,866.70	
Bond Account	112,000.00	
Bond, Interest and Premium Account.....	34,920.00	
Land Damages	9,656.35	
Illinois & Michigan Canal and Illinois River Conditions Department	2,131.48	
Real Estate	529.06	
Law Cases	800.00	
Taxes on District Property.....	210,816.85	
Total cash disbursed.....		$ 608,736.22
Balance this date, in The Continental & Commercial National Bank		473,489.34
		$ 1,082,225.56

GEORGE M. REYNOLDS,
Treasurer.

By J. R. WASHBURN,
Asst. Treasurer.

Chicago, April 23, 1919.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance submits herewith an ordinance for the levy of taxes for the fiscal year ending December 31, 1919, and recommends its passage.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

AN ORDINANCE

For the Levy of Taxes for the Fiscal Year Ending December 31, A. D. 1919.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago.

SECTION 1. That there be and is hereby levied upon all taxable property within the territorial limits of The Sanitary District of Chicago for the fiscal year ending December 31, A. D. 1919, the amount of money hereinafter stated, as follows:

For the payment of the principal on maturing bonds the sum of one million, five hundred twenty-six thousand dollars ($1,526,000.00).

For the payment of accruing interest on bonds the sum of six hundred sixty-eight thousand, six hundred twenty dollars ($668,620.00).

For all other corporate purposes of said The Sanitary District of Chicago the sum of four million, three hundred eighty thousand, eight hundred thirty-eight and fifteen one-hundredths dollars ($4,380,838.15).

SEC. 2. That the Clerk of The Sanitary District of Chicago be, and he is hereby, directed to file with the County Clerk of Cook County a certified copy of this ordinance, and said County Clerk of Cook County aforesaid is hereby directed to cause the aforesaid amount of money to be extended upon and against the taxable property within the territorial limits of The Sanitary District of Chicago in accordance with the laws and statutes of the State of Illinois in such case made and provided; and the Clerk of The Sanitary District of Chicago is hereby directed to cause this ordinance to be immediately published at least once in a newspaper published within the territorial limits of The Sanitary District of Chicago and to incur the necessary expense therefor.

SEC. 3. This ordinance shall take effect and be in full force from and after its passage.

Approved:

CHARLES H. SERGEL,
President of the Board of Trustees of The Sanitary District of Chicago.

Approved as to Form:
C. ARCH WILLIAMS,
Attorney.

Mr. Lawley moved that the report be adopted and that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley, Littler and Nance—Six.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has had under consideration the subject of the removal and disposal of ashes from the Thirty-

ninth Street and Lawrence Avenue pumping stations and is of the opinion that said work should be done by contract, and, therefore, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to prepare specifications for the work of removing and disposing of ashes from said pumping stations, said specifications to be submitted to the Committee on Finance for approval.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley, Littler and Nance—Six.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Attorney transmitting bills for taxes for the year 1918 in the sum of $9,521.28, which taxes have been assessed against lands owned by the Sanitary District in Cook County which are under lease to various tenants.

The Attorney further states said leases provide (except as to the lease with the Western Stone Co.) that the taxes are to be paid by said tenants and upon their failure so to do, the Sanitary District may pay same and charge the amount so paid to said tenants but that it is advisable for the Sanitary District to pay said taxes at this time as interest charges will accrue thereon beginning May 1, 1919.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $9,521.28 payable to Harry R. Gibbons, Treasurer of Cook County, but in case any of said tenants pay said taxes before May 1, 1919, to draw a warrant in a sum which shall be less than the sum above stated by the amounts so paid by said tenants, and deliver said warrant to said Treasurer in full payment of said taxes.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Electrical Engineer in which he states that the Western Union Telegraph Co. owns eight poles on Ashland avenue, between Thirty-ninth street and the south fork of the south branch of the Chicago River, on which the Sanitary District has for some years been operating one

of its circuits under an agreement with said company, which provides that the Sanitary District may purchase said poles in the event that said Company discontinues the use of the same. He further states that said Company has notified him it intends to discontinue said use and has offered to sell said poles to the Sanitary District for the sum of $7.31 each, making a total of $58.50 and he recommends that the offer of said Company be accepted.

Your Committee, having considered the matter, is of the opinion that said poles should be purchased and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $58.50, payable to the Western Union Telegraph Co., and deliver the same to said Company on the receipt of a bill of sale for said poles.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Attorney in which he states that he caused a Bill in Chancery to be filed in the Circuit Court of Will County to enjoin the County Treasurer of said County from collecting interest in the amount of two per cent over and above the ten percent heretofore paid by the Sanitary District for accrued interest on taxes assessed against the Sanitary District for the years 1915, 1916 and 1917, which taxes were in litigation, and also to exclude from taxation for the year 1918 certain personal property which had been taxed in the township of Lockport and in various school districts in said County. He further states that a hearing was had before Judge Dibell on said bill, who entered a decree on April 7, 1919, holding that the Sanitary District was liable for the payment of said additional two per cent interest, which amounts to the sum of $3,449.24, to be paid for taxes for the years 1915, 1916 and 1917. Said judge, however, reduced the amount of taxes assessed against the Sanitary District for the year 1918 by the sum of $1,966.61, making the total amount due for taxes for said year $43,871.61.

The Attorney also states that the taxes due for the year 1918 for property of the Sanitary District situated in the townships of Troy, Channahon and Joliet amounts to the sum of $4,880.70 and he recommends that the taxes in the amounts above stated be paid.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw warrants on the vouchers of the Real Estate Agent payable to Benjamin Jones, County Collector of Will County, in the following sums:

To balance due for interest on taxes on property of the Sanitary District situated in Lockport and DuPage townships for the years 1915, 1916 and 1917 ..... $3,449.24

To taxes for the year 1918 on property of the Sanitary District situated in Lockport and DuPage townships..... 43,871.61

To taxes for the year 1918 on property of the Sanitary District situated in the townships of Troy, Channahon and Joliet 4,880.70

and deliver said warrants to said County Collector in full payment of the taxes specified.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.
Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, April 24, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of April payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

A. Guthrie & Co., Inc. (labor and material furnished as per extra clause, Calumet-Sag Channel)	$ 224.24	
J. W. Landis Mill Co. (stakes and freight)	115.39	
Adam Schillo Lumber Co. (lumber)	28.83	
Peth & Goeler (repairs)	20.25	
Augusta Rau Schwarz (rent)	12.00	
Peth & Goeler (repairing tapes)	1.65	
Public Service Co. of Northern Illinois (gas service)	.76	
		$ 403.12

Maintenance and Operation Account.

John McGillen, Clerk (freight charges paid I. C. R. on fuel, Lawrence Ave. Pumping Station)	$ 173.79	
North Shore Ash Co. (hauling ashes)	300.00	
The Carl Anderson Co. (float)	14.00	
Fuller Morrison Co. (first aid cabinet)	7.20	
Stebbins Hardware Co. (mop and axe)	7.15	
Stebbins Hardware Co. (bolts and screws)	4.52	
H. M. Hooker Glass & Paint Co. (lamp black)	1.45	
The Peoples Gas Light & Coke Co. (gas service)	.65	
Weil Bros. (black nipples)	.66	
		509.42
Amount carried forward		$ 912.54

Amount brought forward		$ 912.54
Edwards & Bradford Lumber Co. (coal, 39th Street Pumping Station)	$ 1,791.90	
Worthington Pump & Machinery Corp. (oil pumps)	124.00	
H. W. Johns-Manville Co. (canvas)	106.05	
Geo. B. Carpenter & Co. (duplex hoist)	70.00	
John Bigane Sons (ton coal)	6.55	
Parkers Towel Supply Co. (towel service)	1.60	
		2,100.10
The Fred J. Ringley Co. (envelopes)	$ 62.50	
Argo Summit Lumber Co. (lumber)	46.85	
F. J. Koch Co. (envelopes)	35.25	
Frank Lustig (teaming service)	26.10	
Frederick C. Hanmore, M. D. (professional services)	21.00	
Sweet Wallach & Co. (supplies, photographic)	19.36	
Mears Slayton Lumber Co. (lumber)	18.27	
J. W. Landis Mill Co. (hardwood strips)	10.00	
A. H. Brindley (x-ray)	5.00	
S. Blatniak (saw, axe and nails)	5.80	
Standard Oil Co. (repairs)	2.55	
Geo. B. Carpenter & Co. (grease cups)	1.85	
Kueffel & Esser Co. (scale)	1.35	
		255.88

Illinois and Michigan Canal and Illinois River Conditions Department.

P. J. Weber & Son (stove)	$ 62.00	
H. & E. F. Hunter (roof cement, etc.)	17.04	
Crown Garage (repairs)	4.95	
		83.99

Law Department.

J. G. Bodenschatz (services rendered)	$ 50.00	
Cunningham Motor Livery (storage for car)	39.05	
L. L. Brown (services rendered looking up record)	25.00	
John McGillen, Clerk (assessment Chicago Law Institute)	16.00	
Callaghan & Co. (reports annotated)	13.00	
Joseph Ebner (service rendered in re Bannon Land)	10.00	
A. B. Dick Co. (machine belt)	1.50	
		154.55

Clerical Department.

John McGillen, Clerk (expenses of employee)	$ 16.35	
Burr-Vack Co. (Waterman fountain pen ink)	3.50	
		19.85

General Account.

Jas. H. Lawley, Chairman Finance Committee (expenses of trip to Springfield and return, re legislative matters)	$ 238.59	
Jas. H. Lawley, Chairman Finance Committee (expenses Joliet and return)	21.22	
The Chicago Evening Post Co. (advertising)	82.50	
Leland Hotel, Springfield, Ill. (expenses of attorneys re legislative matters)	20.75	
Chicago Telephone Co. (telephone service)	15.52	
		378.58
Amount carried forward		$ 3,905.49

Amount brought forward		$ 3,905.49

Police Department.

Overland Motor Co. (repair parts)	$ 6.25	
Chicago Telephone Co. (service)	3.70	
		9.95

Electrical Department.

Chicago Telephone Co. (service)	$ 344.97	
Union Petroleum Co. (gasoline)	250.10	
The Lombard Governor Co. (repairs, etc.)	218.49	
Bentley-Murray & Co. (printing)	213.00	
Central Electric Co. (batteries, etc.)	133.51	
Dr. H. W. Woodruff (professional services)	133.00	
McFarland Hyde Co. (erecting ventilating ducts, etc.)	126.00	
The Essley-Machinery Co. (cutting insulation and sheet iron)	120.00	
The National Atomizer Co. (atomizers)	120.00	
L. L. Fleig & Co., Inc. (pressboard, etc.)	90.40	
Rogers & Hall Co. (booklets, etc.)	85.00	
Conroy Boiler & Tank Works (eye bolts with nuts)	84.57	
Delta Star Electric Co. (disconnecting switches)	89.10	
Union Petroleum Co. (gasoline)	84.05	
National Carbon Co., Inc. (brushes)	83.02	
Western Electric Co. (wire, etc.)	81.98	
Commonwealth Edison Co. (rewinding transformer)	70.04	
Garden City Sand Co. (cement and sand)	68.44	
G. & W. Electric Specialty Co. (pothead tubes)	65.00	
St. Joseph Hospital (room rent injured employee)	67.00	
Crerar Adams & Co. (push cart)	61.20	
The Fred J. Ringley Co. (printing)	50.00	
J. W. Landis Mill Co. (hard maple sticks)	50.00	
Lord & Bushnell Co. (lumber)	40.70	
The Texas Co. (oil)	40.11	
Jos. T. Ryerson & Son (machine bolts, etc.)	32.83	
Commonwealth Edison Co. (sealing compound)	32.34	
Henry Newgard & Co. (slate)	24.96	
Hydrox Co. (water)	24.00	
Chicago Telephone Co. (telephone service)	15.65	
International Harvester Co. of America (water pump, etc.)	15.59	
Stebbins Hardware Co. (galvanized wire, etc.)	13.02	
Riddle & Wunderle Co. (ledger)	10.50	
Fuller Morrison & Co. (listerine, etc.)	10.42	
New York Belting & Packing Co. (hose)	10.39	
Central Electric Co. (lamp globes)	10.32	
City Collector, City of Chicago (inspection charges)	9.75	
Standard Oil Co. (oil)	9.32	
Barrett Hardware Co. (iron)	8.50	
Henry Stuckart (hinges, etc.)	7.84	
H. M. Hooker Glass & Paint Co. (benzine)	6.75	
Crane Co. (pipe)	6.14	
R. Hanisch Sons Co. (gloves)	6.12	
Humphrey & Sons Co. (pinion)	5.75	
Frederick Hanmore, M. D. (professional service)	5.00	
Burr-Vack Co. (cash box)	4.50	
Bellet Magneto Co. (flat spring, etc.)	4.46	
United States Rubber Co. (knee boots)	3.83	
Excelsior Wrapper Co. (excelsior)	3.66	
H. Channon Co. (wrenches, etc.)	3.33	
Amounts carried forward	$ 3,054.65	$ 3,915.44

Amounts brought forward	$ 3,054.65	$ 3,915.44
The White Co. (reflex)	3.24	
The Adder Machine Co. (repairs)	2.60	
Inter-State Brass Co. (round brass rod)	2.06	
John E. Mackin (rental postoffice box)	1.80	
Stewart Warner Speedometer Corp. (float and gaskets)	1.37	
United States Crushed Stone Co. (telephone calls)	1.30	
Addressograph Co. (plates and cards)	.77	
The C. H. Hanson Co. (rubber stamp)	.30	
		3,068.09

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employees)—			
Construction Account	$ 2.90		
Maintenance and Operation Account	4.89		
		$ 7.79	
John McGillen, Clerk (expenses of employees)—			
Maintenance and Operation Account	$ 3.20		
Electrical Department	4.15		
		7.35	
			15.14
Grand Total			$ 6,998.67

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on February 27, 1919 (page 211 of the Proceedings) authorized the Chief Engineer to expend $15,000, in connecting certain farm drainage ditches with the Calumet-Sag Channel, to remove two flumes, construct about 800 yards of rip-rapping and do certain minor work.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the work in question is really several small jobs, along twelve miles of the channel, none of which will cost more than $500.00, and for this reason he has taken informal bids from four contractors to do said work on a unit price basis, which he transmitted to your Committee.

Your Committee further reports that it has considered said bids and finds that the lowest was from E. A. Hanrahan of $1.00 per cubic yard for excavation, $1.00 per cubic yard for filling and $1.00 per square yard for rip-rapping, making a total cost of said work calculated on the estimated quantities $9,250.00, and

he also agrees to remove said flumes for the material therein.

The Chief Engineer recommends that said bid be accepted.

Your Committee is of the opinion that the recommendation of the Chief Engineer should be concurred in and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to accept the bid of E. A. Hanrahan for doing the work above specified for the unit prices specified, provided the cost of the same shall not exceed $9,250.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that in order to provide storage facilities for transformers and oil, it is necessary to extend the platform at the west end of the warehouse building to the garage building and enclose the existing and new platforms with sheet iron at an estimated cost of $330.00 for material and $240.00 for labor, a total of $570.00. He further states that the work of constructing said platform will be done by the regular employes of the Sanitary District and that the necessary material will be purchased in the open market for the lowest prices obtainable.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to have the work above specified performed on the basis stated, provided the total cost of the same shall not exceed the sum of $570.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to have one corner of the garage building partitioned off to be used as a small office, in which the Superintendent of Utility Equipment can make and keep his records; that the Architect has prepared an estimate of the cost of said improvement which shows that the

work can be done for approximately $90.00, $50.00 of which is for material and $40.00 for labor, which can be performed by the regular employes of the Sanitary District.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to have the work above specified performed, provided the cost of the same shall not exceed the sum of $90.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contract with the Standard Sausage Company, a corporation, 957 West 37th street, wherein said company agrees to take and the Sanitary District agrees to furnish 75 K. W. of electrical energy for power purposes for the time and upon the terms and conditions therein set forth, which contract has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate the attached contract which has heretofore been executed by said Standard Sausage Company.

Respectfully submitted,

H. E. LITTLER,
Chairman.

WALLACE G. CLARK,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Lagger & Blatt, attorneys, Joliet, Ill., making application for Albert Mutter of Joliet, for the right to collect and remove all oils, greases and other materials on the Main Channel between Chicago and the Controlling Works at Lockport, Ill.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Lawley presented the following communication:

CHICAGO, April 24, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—On April 10, 1919 (page 323 of the Proceedings) the Board authorized the Marshal to purchase a

boat named the White Flyer for use of the Police Department at a cost not to exceed $1,450.00.

Said purchase has been consummated, and it is necessary under the regulations of the Federal authorities to appoint an agent to assume charge of said boat, and to authorize said agent to sign all documents and to subscribe to all oaths necessary for the documenting of the same.

I desire to recommend the passage of the following order:

Ordered, That W. E. Carter, Marshal, be and he is hereby appointed agent of the Sanitary District in charge of said boat, the White Flyer, and authorized to sign all documents and to subscribe to all oaths necessary for the documenting of said boat.

Respectfully submitted,
JAS. H. LAWLEY,

Approved:
CHARLES H. SERGEL,
President of the Board of Trustees of The Sanitary District of Chicago.

Mr. Lawley moved that the order be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley and Littler—Five.

Nays—None.

RECESS.

Mr. Clark called up the subject of a bill pending in the Legislature of the State of Illinois for the formation of "The Skokie Drainage District," and stated that it had been reported to him that the boundaries of said district embraced territory included in The Sanitary District of Chicago, and moved that the Board take a recess of five minutes to discuss the subject with a view of ascertaining what is necessary to be done in the premises. At the expiration of said time the Board reconvened.

Mr. Clark moved that the subject matter be considered at the meeting of the Committee on State and Municipal Relations, called for Monday, April 28, 1919, at 10:20 o'clock A. M., and that the Clerk be instructed to send notices of said meeting to all parties interested in said bill.

The motion prevailed.

ADJOURNMENT.

Mr. Clark moved that the Board adjourn.

The motion prevailed.

John W. Gillen,
Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, MAY 1, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Clark—One.

BIDS.

The Clerk opened and read the bids received for furnishing coal screenings for the Thirty-ninth Street and Lawrence Avenue Pumping Stations, as shown in the schedules on pages 365-A and 365-B of the Proceedings.

Mr. Lawley moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Finance for report.

The motion prevailed.

The Clerk opened and read the bids received for underground conduit construction, as shown in the schedule on page 366-A of the Proceedings.

Mr. Littler moved that the bids be referred to the Electrical Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meeting of April 17, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance herewith transmits to the Board a grant of easement from the Board of Education of Proviso Township High School District, whereby said Board of Education for the nominal consideration of $1.00 grants to the Sanitary District a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer and appurtenances thereto in the Desplaines River district, in, under and through certain real estate owned by said Board of Education. Said easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the said form of easement, which is hereto attached, the same having been duly executed by said Board of Education of Proviso Township High School District.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it is advised by the Attorney that the annual appropriation ordinance of the Sanitary District for the year 1919, passed February 6, 1919 (page 131 of the Proceedings) for "Department of Law," Item No. 6, appropriates the sum of $2,000.00 for an "Assistant Attorney, four months at

N.

7 Price per Ton Delivered on Cars	8* Net B. T. U. for One Cent	Remarks
$3.20	69,600	
3.15	69,425	
3.21	67,945	
3.21	64,954	B. T. U. figured using 12% as the percentage of ash.
3.75	59,969	Bid based on 2 inch screenings.

THE SANITARY DISTRICT OF CHICAGO.

BIDS FOR FURNISHING COAL SCREENINGS FOR THIRTY-NINTH STREET PUMPING STATION.

Bids opened May 1, 1919.

In order of Magnitude—lowest bid first.

In Order Received	In Order of Magnitude	1 NAMES AND ADDRESSES OF BIDDERS		2 Amount of Deposit	3 NAME OF FUEL	4 Per Cent of Moisture as Delivered	5 Per Cent of Ash in Dry Coal	6 B. T. U. per Pound of Dry Coal	7 Price per Ton Delivered on Cars	8* Net B. T. U. for One Cent	Remarks
3	1	Sangamon County Mining Co.	Chicago.	$600.00	"Jeff" Mine, No. 5 Vein, Sangamon County, Ill.	13.00	10.00	13,000	$3.20	69,600	
4	2	Sterling Midland Coal Co.	Chicago.	600.00	Consolidated Colliery Mine, Cass, Indiana	10.00	13.00	12,400	3.15	69,425	
1	3	Bickett Coal & Coke Co.	Chicago.	600.00	Coffeen, Montgomery County, Illinois	10.00	15.00	12,400	3.21	67,945	
5	4	Wilcoxson Coal & Coke Co.	Chicago.	600.00	No. 5 Vein, Sangamon County, Illinois	10.00	12.00 to 15.00	11,800	3.21	64,954	B. T. U. figured using 12% as the percentage of ash.
2	5	Edwards & Bradford Lumber Co.	Chicago.	600.00	"Economy" Williamson County, Illinois	7.00	13.00	12,300	3.75	59,969	Bid based on 2 inch screenings.

The lowest bid is the one furnishing the greatest number of net British Thermal Units for one cent.

*This is computed from figures in columns 4, 5, 6 and 7 furnished by the bidder as per rule in specifications.

$$\text{Net B. T. U. for one cent} = \frac{2000 \times \text{B. T. U. per pound dry coal} \times (100 \text{ per cent, less per cent of moisture as delivered})}{\text{Price per ton} + (\tfrac{1}{2} \text{ cent} \times \text{number of per cent of ash in dry coal})}$$

PING STATION

In or

In Order Received	6 B. T. U. per Pound of Dry Coal	7 Pric per Toı Delive in B
3	13,000	$3.2
4	12,400	3.2
1	12,400	3.2
6	11,800	3.2
5	13,000	3.7
2	12,300	3.8

THE SANITARY DISTRICT OF CHICAGO.

BIDS FOR FURNISHING COAL SCREENINGS FOR LAWRENCE AVENUE PUMPING STATION

Bids opened May 1, 1919.

In order of Magnitude—lowest bid first.

In Order Received	In Order of Magnitude	1 NAMES AND ADDRESSES OF BIDDERS		2 Amount of Deposit	3 NAME OF FUEL	4 Per Cent of Moisture as Delivered	5 Per Cent of Ash in Dry Coal	6 B. T. U. per Pound of Dry Coal	7 Price per Ton Delivered in Bin	8* Net B. T. U. for One Cent	Remarks
3	1	Sangamon County Mining Co.	Chicago..	$200.00	"Jeff" Mine, No. 5 Vein, Sangamon County, Ill.	13.00	10.00	13,000	$3.20	69,600	
4	2	Sterling Midland Coal Co.	Chicago..	200.00	Consolidated Colliery Co., Cass, Indiana	10.00	13.00	12,400	3.20	68,361	
1	3	Bickell Coal & Coke Co.	Chicago..	200.00	West Clinton, Vermillion County, Indiana	10.00	15.00	12,400	3.22	67,739	
6	4	Wilcoxson Coal & Coke Co.	Chicago..	200.00	No. 5 Vein, Sangamon County, Illinois	10.00	12.00 to 15.00	11,800	3.21	64,954	B. T. U. figured using 12% as the percentage of ash.
5	5	David Rutter & Co.	Chicago..	200.00	Muren Screenings from Muren, Pike Co., Ind.	10.00	10.00	13,000	3.75	61,579	
2	6	Edwards & Bradford Lumber Co.	Chicago..	200.00	"Economy" Williamson County, Illinois	7.00	13.00	12,300	3.80	59,193	Bid based on 2 inch screenings.

The lowest bid is the one furnishing the greatest number of net British Thermal Units for one cent.

*This is computed from figures in columns 4, 5, 6 and 7 furnished by the bidder as per rule in specifications.

$$\text{Net B. T. U. for one cent} = \frac{2000 \times \text{B. T. U. per pound dry coal} \times (100 \text{ per cent, less per cent of moisture as delivered})}{\text{Price per ton} \times 0\tfrac{1}{2} \text{ cent} \times \text{number of per cent of ash in dry coal})}$$

omplete wer Connection)		Four Inch Back Pressure Valve and Trap Installed Complete Price Each	Four Inch Tile Drain from Manhole Installed Complete as Specified Price Per Foot of Pipe	
odded ays	In Sodded Parkways		Drain Pipe Run in Trench with Conduit	Drain Pipe Run in Separate Trench
00	$230.00	$ 6.00	$0.95	$3.00
50	97.50	6.96	.29	.98
43	128.43	5.90	.75	1.75
00	156.00	11.44	.50	.80
00	139.00	8.00	.55	2.50
00	112.00	5.75	.87	.93
00	96.00	11.00	.55	.65
00	130.00	7.00	1.90	2.00
00	140.00	8.50	.75	.95
00	230.00	6.00	.95	3.00
00	138.00	7.75	.80	.90
00	94.00	8.45	.20	2.00

THE SANITARY DISTRICT OF CHICAGO—ELECTRICAL DEPARTMENT.

PROPOSALS RECEIVED FOR UNDERGROUND CONDUIT CONSTRUCTION.

May 1st, 1919.

No. of Bids	NAMES AND ADDRESSES OF BIDDERS		Deposit	Four Duct Tile Conduit Installed Complete Price Per Foot				Manholes Constructed Complete (Exclusive of Valve, Trap and Sewer Connection) Price Each				Four Inch Back Pressure Valve and Trap Installed Complete Price Each	Four Inch Tile Drain from Manhole Installed Complete as Specified Price Per Foot of Pipe	
				In Unpaved Streets	In Paved Streets	In Unsodded Parkways	In Sodded Parkways	In Unpaved Streets	In Paved Streets	In Unsodded Parkways	In Sodded Parkways		Drain Pipe Run in Trench with Conduit	Drain Pipe Run in Separate Trench
1	W. F. Cummings, Inc.	Chicago..	.....	$1.90	$2.75	$1.90	$1.90	$230.00	$240.00	$230.00	$230.00	$ 6.00	$0.95	$3.00
2	Freeman-Sweet Co.	Chicago..	.....	1.17	3.95	1.14	1.16	97.50	116.50	97.50	97.50	6.96	.29	.98
3	Contracting and Material Co.	Chicago..	.....	1.17	1.52	1.17	1.26	118.43	121.43	118.43	128.43	5.90	.75	1.75
4	W. A. Jackson Co.	Chicago..	.....	1.69	2.25	1.69	1.69	156.00	180.00	156.00	156.00	11.44	.50	.80
5	Brennan Construction Co.	Chicago..	.....	1.35	1.50	1.35	1.40	137.00	147.00	137.00	139.00	8.00	.55	2.50
6	Chicago Special Construction Co.	Chicago..	.....	1.09	3.19	3.19	3.19	112.00	121.00	112.00	112.00	5.75	.87	.93
7	F. E. Newberry Electric Co.	Chicago..	.....	.89	2.65	.89	1.20	92.00	115.00	92.00	96.00	11.00	.55	.65
8	John Burns	Chicago..	.....	1.24	1.52	1.24	1.27	128.00	140.00	128.00	130.00	7.00	1.90	2.00
9	W. H. Lyman	Chicago..	.....	1.26	1.66	1.26	1.36	135.00	150.00	135.00	140.00	8.50	.75	.95
10	Nash Brothers	Chicago..	.....	1.90	2.75	1.90	1.90	230.00	240.00	230.00	230.00	6.00	.95	3.00
11	W. S. Newman Co.	Chicago..	.....	1.32	1.70	1.32	1.40	130.00	143.00	132.00	138.00	7.75	.80	.90
12	A. A. MacDonald	Chicago..	.....	1.30	1.57	1.22	1.28	95.00	102.00	92.00	94.00	8.45	.20	2.00

$6,000.00 per year, $2,000.00," which appropriation is exhausted, but that the sum of $1,600.00 in the appropriation Item No. 7 for "Assistant Attorneys, three, at $4,800.00 per year, $14,400.00," has not been expended, and he requests that a transfer of $500.00 be made therefrom to said Item No. 6.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make the following transfer in the appropriations for the year 1919 in accordance with the request of the Attorney:

Department of Law.

From Account 4-11, Item 7, $500.00, to the following account:

No. 4-11, Item 6, Assistant Attorney, one month at $500.00..$500.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 1, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of April payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of April.

John McGillen, Clerk (general payroll)		$ 27,135.77

Construction Account.

Nash-Dowdle Company (work on Evanston sewage pumping station)	$ 27,548.32	
Nash Bros. (work on Contract No. 1, Desplaines river intercepting sewer)	24,993.18	
Jas. O. Heyworth (work on Section 1, Calumet-Sag Channel)	10,360.44	
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	7,127.51	
Jas. O. Heyworth (labor and material furnished on account C. & A. bridge, Calumet-Sag Channel)	361.37	
Chas. Eidham (gravel and hauling charges)	48.00	
United States Rubber Company (men's hip boots)	20.59	
Commonwealth Edison Company (electrical energy)	.50	
		70,459.91
Amount carried forward		$ 97,595.68

Amount brought forward		$ 97,595.68
Maintenance and Operation Account.		
John McGillen, Clerk (special roll, repairing North Shore Channel bridges)	$ 141.73	
John McGillen, Clerk (freight charges, I. C., fuel for Lawrence Ave. Pumping Station)	170.48	
John McGillen, Clerk (freight charges, I. C., fuel for Lawrence Ave. Pumping Station)	88.60	
The Kellogg-Mackay Company (casing and caps, Lawrence Ave. Pumping Station)	72.44	
Fuller-Morrison Company (ammonia, Lawrence Ave. Pumping Station)	2.50	
The Hoppes Mfg. Company (casting, Lawrence Ave. Pumping Station)	1.75	
John McGillen, Clerk (gas service, 39th St. Pumping Station)	7.17	
Kenwood Trucking & Teaming Company (hauling charges, 39th St. Pumping Station)	136.00	
Motor Mica Products Company (grease, 39th St. Pumping Station)	49.66	
Stebbins Hardware Company (level, 39th St. Pumping Station)	.90	
Jos. T. Ryerson & Son (steel plates, 39th St. Pumping Station)	17.94	
Vaughan's Seed Store (grass seed, 39th St. Pumping Station)	5.00	
Stebbins Hardware Company (supplies)	33.21	
Chicago Pneumatic Tool Company (material and labor)	12.70	
		740.08
Illinois and Michigan Canal and Illinois River Conditions Department.		
Standard Oil Company (gasoline)	$ 36.15	
Public Service Company of Northern Illinois (electric current)	12.27	
Peoples Telephone Company (telephone service)	7.15	
Public Service Company of Northern Illinois (water service)	7.10	
Haynes Motor Car Company (priming cup caps)	1.89	
		64.56
Law Department.		
C. N. Stoll (services for obtaining witnesses)	$ 100.00	
John McAuliffe (expenses)	57.00	
		157.00
Clerical Department.		
John M. Smyth Company (inlaid linoleum)	$ 371.31	
John McGillen, Clerk (expenses of employe)	13.64	
Burr-Vack Company (chair pads, etc.)	102.85	
Burr-Vack Company (Arnold's fluid, etc.)	15.15	
Burr-Vack Company (dusters, etc.)	14.25	
Burr-Vack Company (blades)	.80	
Riddle & Wunderle Company (second sheets, etc.)	14.00	
The Berkshire Company (blotters)	10.00	
A. Hannibal (repairing chair)	7.50	
Underwood Typewriter Company (repair parts)	2.25	
Remington Typewriter Company (repairing)	1.25	
		553.00
Police Department.		
John McGillen, Clerk (expenses of employe)		90.00
Amount carried forward		$ 99,200.32

Amount brought forward		$ 99,200.32
General Account.		
John McGillen, Clerk (expenses of employe)	$ 23.37	
John McGillen, Clerk (expenses of employe)	19.07	
John M. Smyth Company (labor laying new and old linoleum)	498.25	
John McGillen, Clerk (expenses trip to Springfield in re legislative matters, President Charles H. Sergel and W. B. Foley, Secretary to President)	50.77	
John McGillen, Clerk (expenses trip to Springfield in re legislative matters, Ross C. Hall, Assistant Attorney)	18.81	
John McGillen, Clerk (expenses trip to Springfield re legislative matters, Wallace G. Clark, Trustee)	10.47	
Leland Hotel (expenses trip to Springfield in re legislative matters, Ross C. Hall and Walter E. Beebe, Assistant Attorneys)	44.00	
Parker's Towel Supply Company (towel service)	26.00	
Leland Hotel (expenses trip to Springfield in re legislative matters, Walter E. Beebe, Assistant Attorney)	13.20	
		703.94
Electrical Department.		
John McGillen, Clerk (regular roll)	$ 16,886.70	
John McGillen, Clerk (freight charges)	4.91	
John McGillen, Clerk (freight charges, insulators)	4.89	
Chicago Telephone Company (telephone service)	435.55	
Chicago Telephone Company (telephone service)	12.70	
Pittsburgh Transformer Company (impedance coils)	405.56	
The Ohio Brass Company (porcelain str. ins.)	380.98	
Jordan Bros. (pulley stand, etc.)	260.00	
General Electric Company (grease cups, etc.)	226.89	
General Electric Company (waxed sheets)	45.00	
Litsinger-Davis Oil Company (gasoline)	206.03	
Litsinger-Davis Oil Company (gasoline)	27.68	
Overland Motor Company (muffler, etc.)	145.90	
The Texas Company (oil)	109.45	
The Electric Storage Battery Company (separators)	103.00	
Commonwealth Edison Company (carbon lamps)	92.90	
Commonwealth Edison Company (transformer)	7.35	
Commonwealth Edison Company (Mazda lamps)	1.58	
Geo. B. Carpenter & Co. (rope)	89.02	
Geo. B. Carpenter & Co. (manila rope)	47.56	
Geo. B. Carpenter & Co. (connecting links, etc.)	3.79	
Geo. B. Carpenter & Co. (anchor light, etc.)	3.41	
The Kellogg-Mackay Company (machine bolts, etc.)	83.20	
L. L. Fleig & Co., Inc. (electric lacquer)	76.02	
Bentley-Murray & Co. (printing)	70.00	
Northern Rubber Company (repairing casings)	62.15	
Burr-Vack Company (gem clips, etc.)	60.64	
Garrett J. Cushing (personal injuries compensation)	52.00	
Bentley-Murray & Co. (printing)	50.48	
Aurilla Scully, Administratrix (compensation for death)	50.00	
Westinghouse Electric & Mfg. Company (relay)	30.77	
Westinghouse Electric & Mfg. Company (springs for switch)	16.29	
The Lombard Governor Company (check valves)	29.23	
The Lunkenheimer Co. (valve screws, etc.)	29.16	
American Supply Company (sanitary wipers)	27.62	
G. Johnson (teaming)	26.73	
The Texas Company (oil and gasoline)	24.00	
Aldine Press (printing)	22.55	
Amounts carried forward	$ 20,191.69	$ 99,200.32

Amounts brought forward	$ 20,191.69	$ 99,200.32
Barrett Hardware Company (machine bolts, etc.)	19.95	
Wellman Spark Plug Company (spark plugs)	18.82	
Conroy Boiler & Tank Works (repairing oil barrels)	17.50	
Standard Oil Company (oil and gasoline)	17.50	
Theo. B. Robertson Products Company (soap powder)	15.43	
H. Channon Company (gasoline fire pot, etc.)	15.30	
A. C. Miller (gasoline)	14.95	
Jos. T. Ryerson & Son (galvanized sheet iron, etc.)	14.91	
Central Electric Company (spark plugs, etc.)	13.27	
Central Electric Company (Okonite tape)	5.82	
L. Gould & Co. (pails, etc.)	12.38	
The Garden City Sand Company (torpedo sand)	7.50	
Barrett Hardware Company (wire, etc.)	6.93	
Ahlberg Bearing Company (bearings)	6.84	
Ahlberg Bearing Company (bearings)	6.77	
Joliet Transfer Company (cartage charges)	5.00	
The White Company (testing)	5.00	
Western Electric Company (pike poles)	4.64	
International Time Recording Company (clock sheets)	4.30	
International Harvester Company (muffler)	3.10	
Excelsior Wrapper Company (excelsior)	3.06	
The Gage Publishing Company, Inc. (subscription)	3.00	
The C. H. Hanson Company (stencil ink and brush)	2.91	
R. Hanisch Sons Company (brass grease cups)	2.88	
Geo. L. Hammons, Inc. (die and collet)	2.60	
Addressograph Company (complete addresses)	2.52	
Theo. B. Robertson Products Company, Inc. (soap powder)	2.50	
Standard Oil Company (Polarine oil)	2.40	
The Fixit Windshield Company (strip)	2.25	
Jos. T. Ryerson & Son (bars)	1.64	
Wilbur J. Connell (freight charges on shipment)	1.08	
Stebbins Hardware Company (iron nuts)	.62	
		20,435.06

Miscellaneous Accounts.

John McGillen, Clerk (special roll)—			
Lawrence Ave. and 39th St. Pumping Stations, first half of April, 1919		$ 654.90	
John McGillen, Clerk (special roll, repairs to Main Channel bridges)—			
Maintenance and Operation Account	$ 320.00		
Electrical Department	7.00		
		327.00	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 227.82		
Maintenance and Operation Account	5.26		
Law Department	13.88		
General Account	.90		
		247.86	
			1,229.76
Grand Total			$120,865.14

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Engineering.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering, to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering the sluice gates for the Desplaines River Sewage Treatment Works, designated as Division "V" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Coffin Valve Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the sluice gates for the Desplaines River Sewage Treatment Works, designated as Division "V" of the contract, be and the same is hereby awarded to the Coffin Valve Company for the lump sum price of $6,250.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Coffin Valve Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering the electrical equipment for the Desplaines River Sewage Treatment Works, designated as Division "P" of the specifications, hav-

ing considered all the proposals presented and the qualifications of each bidder together with the report submitted by the Chief Engineer finds that the lowest responsible bidder is the W. A. Jackson Company of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the electrical equipment for the Desplaines River Sewage Treatment Works, designated as division "P" of the contract, be and the same is hereby awarded to the W. A. Jackson Company for the lump sum price of $22,375.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said W. A. Jackson Company, and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering the structural steel for the Desplaines River Sewage Treatment Works, designated as Division "C" of the specifications, having considered all the proposals presented and the qualifications of each bidder together with the report submitted by the Chief Engineer finds that the lowest responsible bidder is the Kenwood Bridge Company of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the structural steel for the Desplaines River Sewage Treatment Works, designated as division "C" of the contract, be and the same is hereby awarded to the Kenwood Bridge Company for the unit price named in its bid of four cents per pound aggregating the sum of $4,800.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby au-

thorized and directed to execute in duplicate the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Kenwood Bridge Company, and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering the Venturi meters for the Desplaines River Sewage Treatment Works, designated as Division "W" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Builders Iron Foundry.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the Venturi meters for the Desplaines River Sewage Treatment Works, designated as Division "W" of the contract, be and the same is hereby awarded to the Builders Iron Foundry for the lump sum price of $12,760.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Builders Iron Foundry and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy,

Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering blowers for the Desplaines River Sewage Treatment Works, designated as division "R" of the specifications, having considered all the proposals presented and the qualifications of each bidder together with the report submitted by the Chief Engineer finds that the lowest responsible bidder is the Stannard Power Equipment Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering blowers for the Desplaines River Sewage Treatment Works, designated as division "R" of the contract, be and the same is hereby awarded to the Stannard Power Equipment Company for the lump sum price of $22,795.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Stannard Power Equipment Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, that the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering, to which were referred at the meeting held April 24, 1919 (page 352-A of the Proceedings), bids for furconstruction of the Desplaines River Sewage Treatment Plant, designated as Division "A" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Leyden-Ortseifen Company of Chicago, Ill.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily

with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for the construction of the Desplaines River Sewage Treatment Works, designated as Division "A" of the contract, be and the same is hereby awarded to the Leyden-Ortseifen Company for the unit prices named in its bid aggregating the sum of $384,281.25, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Leyden-Ortseifen Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering, to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furing and delivering the pumping machinery for the Desplaines River Sewage Treatment Works, designated as Division "O" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is Eugene E. Maher of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said Eugene E. Maher is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the pumping machinery for the Desplaines River Sewage Treatment Works, designated as Division "O" of the contract, be, and the same is hereby, awarded to Eugene E. Maher for the lump sum price of $9,050.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of The Sanitary District when the same shall have been executed by the said Eugene E. Maher and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering, to which were referred at the meeting held April 24, 1919 (page 351-A of the Proceedings), bids for furnishing and delivering Oregon fir timber for trestles of the Grand Trunk Western Railway Company bridge across the Calumet-Sag Channel having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer finds that the lowest responsible bidder is the Hutchins Lumber and Storage Company.

Your Committee further reports that it is of the opinion that said Hutchins Lumber and Storage Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering Oregon fir timber for the trestle of the Grand Trunk Western Railway Company bridge across the Calumet-Sag Channel be, and the same is hereby, awarded to the Hutchins Lumber and Storage Company for the unit prices named in its bid, aggregating the sum of $5,728.87, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of The Sanitary District when the same shall have been executed by the said Hutchins Lumber and Storage Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
H. E. LITTLER,
Vice-Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following re-

port from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the Board, on March 20, 1919 (page 277 of the Proceedings) authorized the Chief Engineer to direct A. Guthrie & Co., Inc., to care for and support the existing tracks of the Baltimore & Ohio Chicago Terminal Railroad Co. immediately adjoining the excavation of the Calumet-Sag Channel under the extra work clause of its contract, for the excavation and collateral work of contract Section 13 of the Calumet-Sag Channel, at a cost of not to exceed $10,000.00.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that he is advised by the officials of said railroad company that on January 1, 1918, the United States Government took over said railroad and all material on hand was inventoried and became the property of the Railroad Administration and, owing to the fact that the Congress failed to pass an appropriation for repairs and betterments and for work to be done under contracts, said railroad is not allowed to expend any money for anything but for operating expenses and therefore cannot proceed with the work specified in the agreement dated November 2, 1916 (page 443 of the Proceedings) between The Sanitary District and certain railroad companies for the crossing of the right of way of said companies with said Calumet-Sag Channel.

He further states that it is necessary to purchase material and to pay for the labor necessary to construct trestles and lay tracks ready to connect up with the existing tracks when traffic is diverted and that this work will cost about $15,000.00, which work, in addition to the sum of $10,000.00 authorized by said order of the Board of March 20, 1919, whether performed by the railroad company or by The Sanitary District through one of its contractors, must ultimately be paid by The Sanitary District.

The Chief Engineer recommends that he be authorized to direct A. Guthrie & Co., Inc., to perform the work above stated under the extra work clause of its contract for the construction of contract Section 13 of the Calumet-Sag Channel.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized to direct A. Guthrie & Co., Inc., to perform the work of constructing trestles and laying the tracks above specified under the extra work clause of its contract, for the construction of Section 13 of the Calumet-Sag Channel provided the cost of the entire work shall not exceed the sum of $25,000.00.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the Board, on October 11, 1911 (page 1200 of the Proceedings), accepted a grant of easement from John Gunzenhauser to construct and maintain what is known as the north diversion ditch of the Calumet-Sag Channel across certain real estate owned by him until August 30, 1917, and this grant was extended on September 11, 1917 (page 1255 of the Proceedings) to run until December 31, 1919.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that said grant of easement provides that the Sanitary District shall construct and maintain during the term of said grant a farm bridge over said north diversion ditch and that said bridge is in need of immediate repairs.

He further states that A. Guthrie & Co., Inc., offer to make the necessary repairs to said bridge at a cost of not to exceed $400.00, and recommends that said offer be accepted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to accept the offer of A. Guthrie & Co., Inc., to perform the work above specified, provided the cost of the same shall not exceed the sum of $400.00.

Respectfully submitted,

H. E. LITTLER,
Vice-Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Engineering:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the Board, on September 19, 1918 (page 1062 of the Proceedings) authorized the Chief Engineer to direct A. Guthrie & Co., Inc., to concrete the floors of the Baltimore & Ohio Chicago Terminal Railroad Company and the Grand Trunk Western Railway Company bridges across the Calumet-Sag Channel at a cost of $3,500.00 and $4,800.00, respectively, under the extra work clause of its contract for the excavation and collateral work of contract Section 13 of the Calumet-Sag Channel, which authority was never exercised by the Chief Engineer because of war conditions.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the amounts above stated are insufficient for the performance of said work, and that it will cost the additional sums of $300.00 and $200.00 to concrete the floors of said respective bridges.

The Chief Engineer further states that the concrete floors in question are to be covered with a waterproofing material which is to be protected by three inches of concrete, and that said Baltimore & Ohio Chicago Terminal

Railroad Company, which agreed to perform said work at the cost of The Sanitary District, is not equipped to perform the same, and he requests that he may be authorized to direct A. Guthrie & Co., Inc., to perform said work under the extra work clause of its contract for the excavation and collateral work of said Section 13 at a cost of not to exceed $900.00, and to increase the amounts to be paid A. Guthrie & Co., Inc., under said order of September 19, 1918, for concreting said bridges in the respective amounts above stated.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized to direct A. Guthrie & Co., Inc., to perform the work of concreting the floors of the bridges of the Baltimore & Ohio Chicago Terminal Railroad Company and the Grand Trunk Western Railway Company herein specified under the extra work clause of its contract for the excavation and collateral work of Section 13 of the Calumet-Sag Channel, provided the cost of said work shall not exceed the sums of $3,800.00 and $5,000.00 for said respective bridges; and it is further

Ordered, That the Chief Engineer be, and he is hereby, authorized to direct A. Guthrie & Co., Inc., to perform the work of placing three inches of concrete over the waterproofing on the floors of said bridges under the extra work clauses of its said contract, provided the cost of same shall not exceed the sum of $900.00.

Respectfully submitted,
H. E. Littler,
Vice-Chairman.

Matt A. Mueller,
Patrick J. Carr,
Jas. H. Lawley,
Committee on Engineering.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Finance reports that it has examined and approved the bond of the Kenwood Bridge Company with the Fidelity and Deposit Company of Maryland, thereon as surety on its contract for furnishing and delivering the structural steel for the Desplaines River Sewage Treatment Works, designated as Division "C" of the specifications, for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Kenwood Bridge Company for the faithful performance of the contract above specified, said bond being in the penal sum of $2,400.00, and the same is hereby approved; and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
H. E. Littler,
Vice-Chairman.

Matt A. Mueller,
Patrick J. Carr,
Jas. H. Lawley,
Committee on Engineering.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Faullin—Eight.

Nays—None.

The following is the contract and bond of the Kenwood Bridge Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this first day of May, A. D. 1919, by and between the Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated The Sanitary District, and the Kenwood Bridge Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified that are necessary for furnishing and delivering the Structural Steel as called for under Division C of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to cooperate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division C, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the structural steel and all other fittings and appurtenances, including all material, labor,

tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing and delivering f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., the following: Division C, structural steel, including steel columns, roof trusses, purlins, lentels, crane girders, crane rails, floor beams, wall plates, anchors, bolts, washers, etc., shop painted.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as The Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

For the Contractor under Division C, The Sanitary District will prepare sheets of plans supplementary to the plans numbered C-1 to C-3, inclusive, in sufficient detail to serve as shop drawings, to cover any structural steel required and not already detailed on said sheets. These will be furnished to the Contractor by the Sanitary District within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by The Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division C of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation.

After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division C) shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

SPECIFICATIONS.

DIVISION C, STRUCTURAL STEEL.

Description of Work Included.

(C1) This contract covers the furnishing, fabrication and delivery of all structural steel work, field rivets, anchor bolts, crane rail clip bolts, washers, and all other metal work, complete, as shown on the plans or specified herein, required for the substructure, superstructure and miscellaneous appurtenances of the Desplaines River Sewage Treatment Works. Included are steel columns, roof framing including purlins, trusses, bracing, etc., built-up girders, floor beams, guides in openings to boiler room, crane runways, crane runway rails, lintels over windows and doors, trolley I-beams and supports in basement of pump room, eye bolts, foundation bolts, anchor bolts, all bearing and wall plates, anchors, all rivets, bolts, washers, clips, spacers and other structural steel work, complete, delivered f. o. b. cars, the Chicago and Northwestern Railway, Maywood, Ill., including shop painting, as specified and as shown on the plans or ordered by the Engineer, except as hereinafter provided.

The number of turned bolts of each size furnished by the Contractor shall be fifteen (15) per cent in excess of the number nominally required and the number of field rivets of each size shall be fifteen (15) per cent plus ten (10) rivets in excess of the number nominally required.

Framing.

(C2) The sizes of the principal members are shown on the plans numbered C-1 to C-3, inclusive. Additional details will be shown on the supplementary plans specified in Section 4. Before the execution of the work in the shop, the Contractor shall check the shop drawings furnished by the Sanitary District as specified in Section 4 and shall adjust all errors, omissions or differences with the Engineer before commencing the work. Six (6) sets of blue prints will be furnished by The Sanitary District from the plans forming a part of this contract. The Contractor shall furnish the Engineer in triplicate blue prints of any and all erection drawings. All connections and fastenings between the different members shall be of ample strength and all details shall be in accordance with the best accepted practice, subject to the approval of the Engineer.

MATERIAL.

Structural Steel.

(C3) All structural steel shall conform in every respect to the requirements of the "Standard Specifications for Structural Steel for Buildings," Serial Designation A 9-16, of the American Society for Testing Materials.

Stock material shall be used for any or all parts of the work hereunder for which material cannot be rolled so that the work can be completed within the time herein specified. In case the records of the chemical analyses and physical tests of such stock material are not available, a reasonable and sufficient number of tests of same to satisfy the Engineer as to its quality shall be furnished free of charge.

FABRICATION.

Workmanship.

(C4) All workmanship must be first-class in every respect and must conform to the latest and best practice. All material must be thoroughly straightened in the shop by methods that will not injure it before templates are placed on same for laying off and before any work is done upon it. Finished members must be absolutely straight and free from open joints and distortions of any kind. All shearing shall be neatly and accurately done and parts exposed to view shall be neatly finished. All necessary fillers, connections, and other minor details, not shown on the plans, but necessary for the work, shall be furnished without extra charge. All ma-

terial shall be kept clean and protected from the weather.

Rivets.

(C5) The size of rivets, called for on the plans, shall be the actual size of the rivets before heating.

Rivet Holes.

(C6) The diameter of the finished rivet hole shall not be more than one-sixteenth (1/16) inch greater than the diameter of the cold rivet. For unreamed holes, the diameter of the die shall in no case exceed the nominal diameter of the rivet called for on the plans by more than one-eighth (⅛) inch, and for reamed holes the diameter of the die shall be at least one-eighth (⅛) inch less than the nominal diameter of the rivet. All holes must be clean cut without torn or ragged edges.

Punching must be accurately done. Drifting to enlarge unfair holes will not be permitted. If holes must be enlarged to admit rivets they must be reamed. Poor matching of holes will be cause for rejection.

Reaming.

(C7) Reaming of rivet holes will not be required under this contract except in case of mismatched or misplaced holes and holes where turned bolts are placed, and except where expressly called for on the plans.

Milling.

(C8) All milling called for on the plans shall be done with suitable tools and the milled surface shall be smooth and true.

Milling of columns shall be done after the columns are riveted up complete except sole plates.

The entire ends of all stiffener angles must be carefully milled or ground to fit surfaces on which they are to bear.

Assembling.

(C9) All built-up members must be well pinned up and all parts drawn thoroughly together for riveting. No chipping or burrs will be allowed between the surfaces, and a sufficient number of bolts must be used to keep the parts in absolute contact. Before assembling the pieces shall be cleaned. The surfaces in contact shall then be painted one (1) heavy coat of the specified red lead paint before assembling for riveting. All pieces in the assembled member must be straight and true to line before riveting.

Riveting.

(C10) Rivets shall be uniformly heated to a light cherry red in a gas or oil furnace so constructed that it can be adjusted to the proper temperature. All rivets must be machine driven wherever possible, otherwise they must be driven with pneumatic hammers. The machines must be direct acting and capable of retaining the applied pressure after the upsetting is completed.

All rivets when driven must be absolutely tight and must completely fill the holes. The rivet heads must be round and of uniform size for the same size rivets throughout the work. They must be full and neatly made, concentric with the rivet holes, with the under side of the heads in close contact with the metal, and shall thoroughly pinch the connected pieces together. No calking or recupping of cold or loose rivets will be allowed. Loose, burned or defective rivets shall be cut out and replaced without injuring adjacent metal. If necessary in order to avoid injury to the surrounding metal, they shall be drilled out. Bolts shall not be substituted for rivets except by special permission of the Engineer, in which case the bolts shall be turned and the number shall be increased as the Engineer may direct. All heads of countersunk rivets shall be chipped smooth unless otherwise noted on the plans.

Annealing.

(C11) Steel which has been partially heated shall be properly annealed except where used in minor details. Steel shall not be welded.

Bolts.

(C12) All turned bolts shall be made of structural steel and shall be turned to a driving fit unless otherwise specified or shown on plans. The diameter of the thread must be one-sixteenth (1/16) inch less than the diameter of the finished bolt to prevent injury in driving. The bolt must fit tight the entire length of the hole and all threads must be outside of the hole. Washers not less than one-quarter (¼) inch thick shall be used under nuts, and steel beveled washers shall be used under heads and nuts on all inclined surfaces. Holes for turned bolts must be reamed parallel and square with the members, with all parts assembled.

Rough bolts used for bolting connections of purlins and crane girders as

shown on the plans shall be structural steel.

Nuts.

(C13) All nuts shall be hexagonal in shape and all threads shall be close fitting, truncated "V" threads. United States Standard.

Plate Girders.

(C14) When web plates are spliced not more than one-quarter (¼) inch clearance between ends of plates will be allowed.

The web stiffeners of plate girders shall have a full close bearing against the flange angles. Filler and splice plates between stiffeners or connecting angles and web shall fit within one-eighth (⅛) inch of flange angles.

Fillets.

(C15) All re-entrant cuts shall be filleted and both fillet and cut finished. No unfilleted cuts will be allowed.

PAINTING.

Painting in Shop.

(C16) All metal work furnished hereunder by the Contractor shall be painted in the shop after fabrication and before exposing to the weather, unless otherwise directed by the Engineer.

No metal work shall be painted until it has been accepted by the inspector. In riveted work all surfaces in contact shall be cleaned and shall receive one (1) heavy coat of red lead paint, hereinafter specified, before assembling for riveting. Surfaces between angles or other shapes riveted closely together in pairs and other surfaces not in contact, but inaccessible after riveting, shall receive two (2) coats of the specified red lead paint. All of the work shall be thoroughly scraped and brushed on all surfaces, and all mill scale, rust and dirt removed, using approved stiff scrapers and wire brushes. All greasy surfaces shall be carefully cleaned with benzine. Before taking out of the shop, all structural work and castings shall receive one (1) good coat of the specified red lead paint, well brushed in. No painting with air will be allowed. All erection marks shall be on painted surfaces. All paint must be dry when the material is loaded on cars. Painting on cars is positively prohibited.

No painting shall be performed upon damp or frosty metal, or in wet, foggy or freezing weather, or if such weather is indicated, except by the express permission of the Engineer and in the manner the Engineer may direct. Any painting found defective shall be scraped off and repainted as the Engineer may direct. Before final acceptance of the work hereunder all damaged surfaces of paint shall be cleaned and repainted or touched up to the satisfaction of the Engineer. The manufacturer of any paint used shall have the authority at all times to inspect the storage, handling and application of same.

All brushes used in painting shall not be larger than 8/0 oval or four (4) inch heavy flat, all-bristle brushes, well bridled. Oval brushes are preferred.

Paint.

(C17) The shop coat of paint herein specified and the paint for rivet heads and for spotting or repainting damaged surfaces of the shop coat of paint shall consist of the red lead and raw linseed oil mixed in the proportions of twenty-five (25) pounds of dry red lead, or thirty-five (35) pounds of red lead paste, to each gallon of linseed oil with the addition of not more than one-half (½) pint of pure turpentine or pure turpentine Japan dryer, or a total of not more than one-half (½) pint of both of the same, as the Engineer may permit.

The mixing of dry red lead shall be performed with a proper churn or other device approved by the Engineer, unless a small quantity is mixed, and it must be kept stirred and used immediately after mixing. The pigments shall be thoroughly incorporated with the oil.

All linseed oil shall be pure, clear, well settled raw linseed oil conforming to "Standard Specifications for Purity of Raw Linseed Oil from North American Seed," Serial Designation D1-15, adopted in 1913, revised in 1915, by the American Society for Testing Materials.

All red lead paste shall be manufactured from red lead and the specified linseed oil, and shall contain not less than ninety-two (92) per cent by weight of red lead. The red lead shall have a true red lead content (Pb_3O_4) of not less than ninety-five (95) per cent and shall be of such fineness that not less than ninety-nine and one-half (99½) per cent will pass through a two hundred (200) mesh screen. All red lead paste shall be capable of standing until used without perceptible hardening. All hardened paste will be rejected.

The brands of oil, red lead and red lead paste, shall be submitted to and shall be approved by the Engineer before delivery at the shop or at the work.

Any material delivered not of the brand or quality approved by the Engineer will be rejected.

All paint, red lead, linseed oil and dryer shall be delivered at the work in the original unbroken containers bearing the manufacturer's brand, and the containers shall be opened only in the presence of the Engineer. All paints shall be thoroughly stirred before being taken from the containers, shall be kept stirred while using, and all ready mixed paint shall be applied exactly as received from the manufacturer without the addition of any kind of a dryer or thinner except as directed by the Engineer.

Ready Mixed Red Lead Paint.

(C18) A ready mixed red lead paint manufactured under inspection from red lead or red lead paste, and linseed oil, all of a purity at least equal to that herein specified and of a brand or formula satisfactory to the Engineer, which paint shall contain not less than eighteen (18) pounds of dry red lead in each gallon of paint, may be used in lieu of the red lead paint hereinbefore specified if the Engineer shall permit, subject to all conditions as to manufacture, proportions of ingredients, analyses, inspection and use and as to time limits for use of such paint, that the Engineer may require. Inspection of the manufacture of ready mixed red lead paint shall be performed by an inspection bureau designated by the Engineer and the cost of such inspection shall be paid by the Contractor.

Analyses.

(C19) Analyses of samples of any paint, oil or pigments, as furnished or as applied, may be made from time to time as the Engineer may direct, and if such samples be found not to comply with these specifications the paint may be rejected and the cost of analyses of such material shall be paid by the Contractor without charge to The Sanitary District.

WEIGHTS.

Measurement.

(C20) The weight of structural steel work to be paid for shall be the actual scale weight of the steel work as delivlivered.

The Contractor shall provide all necessary facilities for the determination of the correct scale weight of all material by the Engineer. The weight stated in the shipping invoices shall be certified by the Engineer, and no uncertified weight in excess of the weight as calculated from the shop plans will be paid for. In no case, however, shall the total weight of metal to be paid for exceed the total weight of such metal as calculated from the shop plans by more than two and one-half (2½) per cent.

DELIVERY OF MATERIAL.

Shipping.

(C21) All parts shall be carefully loaded for shipment so as to avoid injury in transportation and shall be at the Contractor's risk until delivery of all material is completed in accordance with the plans and as herein specified. All rivets, bolts and similar small material shall be securely boxed and the boxes shall be plainly marked with paint, to show their contents and the net weight of the same. Every piece of metal work not boxed shall have its weight plainly marked upon it with paint, unless of a size too small to permit of such marking. Complete shipping invoices shall be made of every shipment and three copies of each invoice shall be sent to The Sanitary District at the time the shipment is made. Such invoices shall state the weight, description and erection mark of each piece that is not boxed and the contents and net weight of same in each box. All weights given shall be the actual net scale weights, certified to as correct by the Engineer, not estimated weights.

Delivery.

(C22) The metal work herein specified shall be delivered free on board cars at Maywood, Illinois, on a team track or side track of the Chicago and North-Western Railway, to be designated by the Engineer, located at or near the Maywood freight station of said railway.

The Contractor may, at his own expense, make delivery by teams, motor trucks or other vehicles at the site of the work, on the land owned by the Sanitary District, Broadview, Illinois, at such point as may be designated by the Engineer.

The Contractor shall complete the metal work included hereunder in sufficient time to deliver same on or before the date hereinafter specified for delivery of such metal work, unless otherwise directed by the Engineer in writing. The Contractor shall notify the Engineer in writing of the date when

said metal work will be ready for shipment to The Sanitary District, such notification to be received by the Engineer at least ten (10) days previous to the date when such metal work will be ready for shipment, and no metal work shall be shipped to The Sanitary District until the Contractor shall have received the written order of the Engineer to ship same, designating the time of delivery of such metal work and the contractor to whom said metal work is to be consigned. The Contractor shall not be required, however, to deliver the metal work previous to the date hereinafter specified for the delivery of same. All of the metal work shall be shipped at one time or in shipments immediately following each other unless otherwise directed or permitted by the Engineer.

Payment.

(C23) The unit price specified to be paid per pound for structural steel work shall include the furnishing, fabrication and delivery of the steel work complete, with bolts, nuts and washers, rivets, and other fastenings, and all specified painting, and shall include the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

GENERAL CONDITIONS.

Sanitary District Law.

ARTICLE 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

ART. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Enginer, notwithstanding any minor omissions in the specifications or drawings.

Approximate Quantities.

ART. 4. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that The Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the plans herein mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Changes in Plans.

ART. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the

amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and The Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

ART. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Wherever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then The Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against The Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and The Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

ART. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

ART. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All inspection of any and all material furnished for use in work to be performed under Division A, shall be made at the site of the work after delivery of the material; provided that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay The Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the extra time expended in performing any such inspection at such other points.

Under Division C, all structural steel work will be inspected, however, without expense to the Contractor, if all the structural steel is fabricated in one shop.

Under Division O, the fabrication of material will be inspected at the shop or shops where fabricated. The Engineer shall have full access at all times to all parts of the shop where material under his inspection is being manufactured. If ordered by the Chief Engineer, the Engineer shall stamp each piece accepted with a private mark and any piece not so marked may be rejected at any time and at any stage of the work. If the Engineer, through an oversight or otherwise, has accepted material or work which is contrary to the specifications, this material may be rejected, regardless of the stage of completion.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

(Division A) The Contractor shall be guided by the lines, stakes, marks and grades given by the Engineer and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Progress Certificates.

ART. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents.

ART. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by The Sanitary District, and in

the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then The Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

ART. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause The Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save The Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by The Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

ART. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912"; approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

ART. 23. The Contractor shall be responsible for the entire work until completed and accepted by The Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

ART. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that

said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided, shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of The Sanitary District.

Liens.

ART. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

ART. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division C hereby agrees to fabricate and deliver to the railroad, or otherwise ship the structural steel within one hundred (100) calendar days from the said date of approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago and North-Western Railway, Maywood, Illinois.

It is understood and agreed that TIME is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

ART. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division C within the respective time specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of ten dol-

lars ($10.00) for Division C for each and every day that said Contractor shall be in default in the completion of said work ready for operation.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to TIME AND LIQUIDATED DAMAGES FOR DELAYS.

Extensions or Additions.

ART. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to LIQUIDATED DAMAGES, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

ART. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from The Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

ART. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of The Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States Government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for

wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by The Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Division C.

ART. 32. It is further agreed by and between the parties hereto that if said Contractor abandons this contract or fails financially, or from any other cause whatsoever is unable to carry out the terms and conditions of this contract, and is unable to complete the same, or if he assigns this contract without the consent of The Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or The Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, machinery or equipment as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by The Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to The Sanitary District by said Contractor.

Contractor's Bond.

ART. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of The Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

ART. 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION C.

Structural Steel.

For furnishing and delivery, complete, of the structural steel, including columns, roof trusses, purlins, lintels, crane girders, crane rails, floor beams, wall plates, anchors, bolts, washers, etc., with shop painting, all as specified f. o. b. cars, the Chicago and North Western Railway, Maywood, Ill., the sum of no dollars and four cents ($0.04) per pound.

The structural steel will be fabricated at Chicago, Illinois, in the shops of the Kenwood Bridge Company.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work per-

formed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

ART. 36. Division C. It is agreed that in case the Engineer shall not direct or permit the Contractor to deliver said metal work within a period of one (1) month after the date herein specified for the delivery of same or within a period of one (1) month after the time when all of said metal work is actually fully completed satisfactory to the Engineer if completed after said specified date, then said Sanitary District upon the expiration of not more than two (2) months after said date specified for completion of said metal work, or after said time of actual completion of said metal work, if completed after said specified date, shall pay to the Contractor, on account, a sum equal to eighty-five (85) per cent of the value, as estimated by the Engineer, of said metal work. All of said metal work for which said payment is made shall thereupon become the property of said Sanitary District and shall be so marked by the Contractor and shall be stored separate and apart from all other material in the possession of said Contractor, in a manner satisfactory to the Engineer, but shall be stored at the sole risk of the Contractor.

When the entire delivery of said metal work has been completed as herein specified, and when the same has been inspected and found to be complete and in accordance with the specifications and contract, the Engineer will give his certificate to that effect. Whereupon said Sanitary District, at the expiration of thirty (30) days after such complete delivery and the issuance of such certificate, will pay, and it hereby binds itself to pay to the said Contractor the amount shown by said certificate to be due to the said Contractor, excepting such sums as may be lawfully retained under any of the provisions of this contract.

Final Payment.

ART. 37. Upon the completion of all the work included under this contract, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay, the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

IN WITNESS WHEREOF, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President and to be duly attested and its corporate seal to be hereunto affixed.

THE SANITARY DISTRICT OF CHICAGO,
By JAS. H. LAWLEY,
Chairman of Its Finance Committee.

Attest:
JOHN MCGILLEN,
Clerk.

(Seal)

KENWOOD BRIDGE COMPANY (Seal.),
By PAUL WILLIS,
President.

Attest:
A. J. T. BENNETT,
Secretary.

Approved May 1, 1919:
H. I. STEFFA,
Mechanical Engineer.
LANGDON PEARSE,
Sanitary Engineer.
F. L. BARRETT,
Architect.
G. S. BRACK,
Electrical Engineer.
G. M. WISNER,
Chief Engineer.
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, The Kenwood Bridge Company, a corporation organized under the laws of the State of Illinois, as principal and Fidelity and Deposit Company of Maryland as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Twenty-four Hundred Dollars and no/cents ($2,400.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, whereas, the above bounden Kenwood Bridge Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing and delivering the structural steel as specified under Division "C" of the attached contract, f. o. b. cars, the Chicago and North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division C of the attached contract.

Now, if the said Kenwood Bridge Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Kenwood Bridge Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayments of overpayments and including all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Kenwood Bridge Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Kenwood Bridge Company or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the

course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Kenwood Bridge Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

KENWOOD BRIDGE COMPANY (Seal.),
PAUL WILLIS,
President.

Attest:
A. J. T. BENNETT,
Secretary.

FIDELITY AND DEPOSIT COMPANY OF MARYLAND (Seal.),
By ARTHUR C. ARNOLD,
Attorney-in-fact.

W. H. HANSMANN,
Agent.

Approved as to form May 1, A. D. 1919.
CHARLES E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has examined and approved the bond of the Leyden-Ortseifen Company with the New Amsterdam Casualty Company thereon as surety, for the faithful performance of its contract for the construction of the Desplaines River Sewage Treatment Plant designated as Division "A" of the specification for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Leyden-Ortseifen Company for the faithful performance of the above specified contract, said bond being in the penal sum of $192,140.63, be, and the same is hereby approved; and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

The following is the contract and bond of the Leyden-Ortseifen Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this first day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Leyden-Ortseifen Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty erpressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing, delivering and erecting the

Sewage Treatment Plant and the apparatus, equipment and appurtenances thereto, as called for under Division A of the attached specifications, complete, as specified, at the Des Plaines River Sewage Treatment Works of the Sanitary District in the Village of Broadview, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision, shall be final and conclusive and such estimate and decision in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division A, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the sewage treatment plant with appurtenances, structural steel, pumps, electrical equipment, including motors and accessories, transformers, controlling apparatus, switches, switchboards, blowers, sluice gates, Venturi meters, and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing, delivering and erecting at the site of the Des Plaines River Sewage Treatment Works, the following:

Division A.—Sewage Treatment Plant, including excavation, concrete, reinforcing steel, cast iron piping, gate valves, tile piping and miscellaneous material and equipment to construct an activated sludge plant.

The contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Provisions for Handling Equipment at Site.

(3) The Sanitary District will reserve a right-of-way to the station site, from First Avenue on the west. A hand crane will be installed under Division A and will be available for handling the equipment to be installed in the pump and blower room. The Contractor shall operate this, however, at his own expense, and shall properly oil and maintain it during his use thereof.

The Contractor under Division A shall, at his own expense, provide any temporary blocking, supports or other protection for the pump and blower room floor necessary to prevent injury to the same, and shall make good at his own expense any damages done by him to the station structure or its appurtenances or to the equipment handled in unloading from the cars, hauling, unloading, and installing any of the equipment included under this contract for erection under Division A, or in removing plant or other property or in cleaning up.

It is expected that the superstructure of the station will be sufficiently advanced at the time of installation to afford protection from storms to the equipment included under this contract after the same is within the superstructure walls. The Contractor under Division A shall, however, furnish such protection as may be necessary against temperature, dust, dirt, and humidity, and shall be fully responsible for the protection of such equipment until its final acceptance.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION A.

Spiral Riveted Steel Pipe.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

For the Contractor under Division A, the Sanitary District will prepare sheets of plans supplementary to the plans numbered A-1 to A-24, inclusive, in sufficient detail to serve as shop drawing for the iron castings, and for the reinforcing steel. These will be furnished to the Contractor by the Sanitary District within a reasonable time after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, as required for the prosecution of the work. The Sanitary District will also

prepare supplementary drawings of the piping layouts and list the cast-iron pipe and specials.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Divisions C, N, O, P, R, V, W, of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Foundation Bolts.

(7) The foundation bolts for the pumps, electrical machinery, blowers, and other equipment furnished by the Sanitary District will be furnished by the Sanitary District and placed by the Contractor under Division A, in accordance with substantial templates constructed by him to dimensions furnished by the contractor for the equipment to be set. Previous to setting any piece of equipment on its foundation the Contractor shall satisfy himself that these bolts are properly placed and shall make no claim against the Sanitary District for any expense incurred in resetting of equipment due to any error in the bolt setting. Should any such error be discovered, the same will be corrected by the Sanitary District, unless the error be due to incorrect dimensions furnished by the contractor for the equipment furnished, in which case expense of making such corrections shall be paid by said contractor furnishing the equipment.

Shop Tests.

(8) Each pump shall be tested in the shop to such an extent as may be necessary to determine the balance of the moving parts and the character of the workmanship.

Each motor shall be tested in the shop for efficiency, insulation and operating characteristics, except as hereinafter specified.

All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments and shall make the tests, and shall provide all facilities for the Engineer to inspect the work previous, during or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all the necessary equipment and facilities and shall make the tests as outlined herein.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

Cutting, Fitting and Patching.

(11) The Contractor for Division A shall execute all cutting and repairing that may be required in the work under Division A by other contractors. Wherever possible the other contractors shall give in advance definite information to the Engineer so that the Engineer can instruct the Contractor under Division A to leave the required holes and chases, as the work progresses. Should any cutting be required through the neglect of any contractor to give the necessary information to the Engineer, sufficiently in advance, the Engineer will order the work done by the appropriate trade at the expense of the contractor at fault. Excessive cutting will not be allowed. Only sharp tools suitable for the purpose shall be used. The cutting of beams, purlins, joists or other structural features shall be done only at the places directed by the Engineer.

Any cutting of work placed by other contractors and required by the Contractor under Division A to install his work after the work of other contractors is in place, and the patching of the same must be done by the contractor doing that branch of the work. The cost of the same, for any work required by the Contractor under Division A shall be paid by him to the other contractor.

SPECIFICATIONS.

DIVISION A.

SEWAGE TREATMENT PLANT.

General Description.

(A1) The work to be done under Division A of this contract includes building a sewage treatment plant of the type known as activated sludge. The work includes the furnishing and placing of all material necessary to construct the substructure of a pump and blower house, screen house and pipe gallery, together with a grit chamber, aeration tanks, settling tanks, sludge storage tanks, connecting piping for sewage, air piping, coal and ash-pocket, outfall to river, connecting conduits and drainage of ground; and further the performing of all excavation and concrete work, the furnishing and placing of reinforcing steel, cast iron work, etc., the furnishing and laying of a cast iron water pipe, grading, surfacing, building a macadam pavement, gravel walks, and other miscellaneous work and appurtenances as shown on the plans and herein specified.

Underground Structures.

(A2) Various underground and other structures are shown on the plans hereto attached, including water and gas pipes, sewers, telephone and telegraph conduits and poles, hydrants, fire alarm poles and conduits, electric poles and conduits and manholes for various purposes. The location and dimensions of such structures, where given, are believed to be reasonably correct, but do not purport to be absolutely so. All known underground structures are plotted on the plans and profiles of the information of the Contractor, but information so given is not to be construed as a representation that such structures will be found or encountered as plotted. Other structures may also

be encountered not shown on the plans. All structures encountered shall be taken care of by the Contractor at his own expense, except such structures as the owners thereof are required to remove or maintain in accordance with existing ordinances of the Village of Maywood and the Village of Broadview.

ITEM 1—EARTH EXCAVATION.

Description.

(A3) The Contractor shall make, in open cut, to the lines and grades given by the Engineer, all excavation, required for building the structures, laying the pipes, drains, and conduits, building the connection to the inlet sewer, manholes, and appurtenances, and shall excavate any other material which, in the opinion of the Engineer, is desirable, for any purpose appurtenant to the construction of the work.

Excavation shall include clearing the site of the work, the loosening, loading, removing, transporting and disposing of all materials, wet or dry, necessary to be removed for purposes of construction, the furnishing, placing and removing of all sheeting and bracing, the draining, pumping and backfilling of trenches and pits, the supporting of structures above and below the ground, and all other work the cost of which is herein specified to be covered by the unit price to be paid for earth excavation.

Character of Material.

(A4) Contours of the ground are shown on the plans hereto attached. These contours are believed to be reasonably correct but do not purport to be absolutely so, and, together with any schedule of quantities, are presented only as an approximation. It is not expected that rock will be found. Samples of borings made with a four (4) inch hand auger and samples from two test-pits are on file in the Engineer's office. The results are plotted on the plans for the information of the Contractor, but are not guaranteed. The Contractor must satisfy himself regarding the character or amount of loam, peat, clay, sand, quicksand, gravel, glacial drift rock and all other material to be encountered and work to be performed.

Clearing.

(A5) The site of all excavation, embankments and fills shall be first cleared of all trees, buildings, fences, lumber, stumps, brush, weeds, and rubbish, which shall be removed or disposed of in a satisfactory manner.

Stripping Black Soil.

(A6) The black soil shall be removed to such depth as shall be directed from all places where excavations are to be made and where grading is to be done. The loam shall be stored and then used as directed for the surfacing of the finished grading and ground, when the work has been cleaned up. The black soil shall be spread to a depth of 12 inches in surfacing the grading around the pump and blower house, and in the immediate vicinity thereof."

Trenching and Trimming.

(A7) In excavating for the connections to the inlet sewer and for all sewers, conduits, pipe lines, and in similar work, the trenches between the lines of sheeting must be of sufficient width to permit the work to be constructed in the manner and of the size specified.

In all excavation for sewers or other conduits built in place, wherever the nature of the ground will admit, the bottom of the excavation is to have the shape and dimensions of the outside of the invert of the sewer. In order to secure this shape, the Contractor is to provide a pattern or form made with two outlines, one to fit the outside and the other the inside of the invert. This form is to be firmly and securely set to the proper grade as given by the Engineer, and is to remain unmoved in position until after the masonry is laid. The bed for the sewer is to be brought to the required shape, by trimming with suitable tools to a line stretched between the outsides of the masonry and the form.

At and below the spring-line bearings of all sewer arches the masonry is to bear directly on the original ground or sheeting, and, in general, all sheeting in masonry bearing is to be cut off as ordered by the Engineer and left in place.

The excavation for the bottom of the various structures, including the pump and blower house, meter vault, grit chamber, screen chamber, aeration tanks, settling tanks, sludge concentration tanks, pipe gallery, etc., shall be neatly trimmed to the lines

and grades given by the Engineer. In particular, care shall be taken in trimming for the settling tanks.

Where indicated on the plans or ordered by the Engineer the excavation shall be made as far as possible to permit backing the concrete directly against the solid earth.

Unauthorized Excavation.

(A8) Wherever the excavation is carried beyond or below the lines and grades given by the Engineer, the Contractor shall, at his own expense, refill all such excavated space with such material and in such manner as may be directed, in order to insure the stability of the various structures. Beneath all structures, space excavated without authority shall be refilled with concrete by the Contractor at his own expense. In general all space excavated without authority at and below the springline bearing of all sewer arches shall be filled with concrete by the contractor at his own expense.

Additional Excavation.

(A9) It is expected that satisfactory material for foundation will be found at the elevations shown on the plans, but in case the materials encountered are not suitable, or in case it is found desirable or necessary to go to additional depths or widths, the excavation shall be carried to such additional depth or width as the Engineer may direct. Additional excavation so ordered, and concrete ordered for filling such additional excavation will be paid for at the respective unit prices herein specified for excavation and concrete.

Shoring.

(A10) All trenches and other excavations shall be properly sheeted and braced, to furnish working conditions acceptable to the Engineer. The bracing shall be so arranged as not to place any stress on portions of the completed work until the general construction thereof has proceeded far enough to provide ample strength, in the opinion of the Engineer. Any damage to structures occurring through settlements, water or earth pressures, slides, caves, or other causes, due to failure or lack of sheeting or bracing or improper bracing, or through negligence or fault of the Contractor in any other manner shall be repaired by the Contractor at his own expense.

Removal of Timbering.

(A11) Where it is found necessary to sheet at the bottom, the trenches for the concrete sewers, pipes or other structures, the lowest section of sheeting shall be driven, or cut off after driving, in such lengths as the Engineer may direct. Such sheeting shall be left in place and utilized as an outside form for concrete.

Where required, all timbering or other supports shall be removed and upon their removal all voids shall be carefully filled as directed.

No payment will be made to the Contractor for any lumber, sheeting, or shoring left in place, except on the 42-inch outlet sewer, and then only if ordered in writing by the Engineer. If any timbering is ordered in writing by the Engineer to remain in place, such timber shall be cut off as directed, and that remaining in place will be paid for under Item 22 at the unit price of thirty dollars ($30.00) per thousand feet board measure, as specified herein, but no allowance will be made for loss or waste.

Removal of Water.

(A12) The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water or sewage entering the excavations or other parts of the work, and keep said excavations and the structures dry until the structures to be built therein are completed. No masonry shall be laid in water nor shall water be allowed to rise over masonry until the concrete or mortar has set at least 24 hours.

The Contractor shall, when required by the Engineer, pump out and keep free from water the suction chamber, suction and discharge piping and connections, during the erection of the pumps. He shall also remove the water after the suction chamber, pump suction and discharge piping have been tested for tightness. He shall further remove the water, when ordered by the Engineer, so that the suction chamber and all other work under this contract can be inspected before the final acceptance thereof. He shall furnish at his own expense all water used for testing purposes, both of structures and piping and

shall remove the water as required, when the tests are completed.

The Sanitary District will maintain a concrete or brick bulkhead in the existing inlet sewer to which the Contractor is to connect. The Contractor shall maintain at all times and operate, wherever necessary, sufficient pumping plant to promptly remove all water, including seepage from the bulkhead, from the suction chamber of the pumping station, and keep the entire work free from water until the contract is completed. The Contractor shall be liable for all damage by flooding to any machinery, apparatus or material of any kind whatsoever, whether stored, in process of erection, or erected, in the pump and blower room, boiler-room, basements, storeroom, coal pocket, or any other part of the sewage treatment works, or on the property of the Sanitary District, belonging to said Contractor or to any other contractor employed on the Desplaines River Sewage Treatment Works by the Sanitary District, or to the Sanitary District, provided that in case the said bulkhead fails the Contractor shall not be held liable for damage caused by the failure, if said failure causes more than a reasonable amount of leakage through or around the bulkhead.

The Contractor shall dispose of the water from the work in a suitable manner, without damage to adjacent property. No water shall be drained into work built or under construction on other contracts of the Desplaines River intercepting sewer unless the consent of the Engineer is first obtained.

Disposal of Material.

(A13) Material excavated shall be disposed of in backfilling, building embankments, making fills, or grading around the work, as may be directed and to the lines and grades given by the Engineer. No additional payment will be made for any excavated material used in filling or building embankments around structures or roads, or in grading.

No excavated material shall be dumped near enough to the work to cause pressures against newly set masonry, objectionable in the opinion of the Engineer.

All materials excavated and not disposed of as herein specified shall be removed at once by the Contractor at his expense.

Backfilling.

(A14) All lumber, rubbish and braces shall be carefully removed from behind walls or other structures, unless ordered left in place by the Engineer. Unless otherwise specified, all trenches or excavations shall then be backfilled up to the original surface of the ground or to such grades as shall be directed. The backfilling shall be done as completely as possible, and the material shall be moistened and well tamped in such a manner as to prevent after-settlement. Around all structures, the trenches and excavations shall be flooded with water while the backfilling is being placed. The filling shall be made with the best material available, selected especially for the purpose and free from stones over three (3) inches in diameter, particularly immediately in and around pipe sewers.

On the concrete sewer connection, conduits, and other arched structures built in place, after the arching is completed and before the centers are struck, and on vitrified tile pipe sewers, after the sewer has been placed, and the joints have permanently set as approved by the Engineer, the trench is to be carefully filled by depositing without shock and by tamping suitable earth or sand or other selected material at the sides and to a height of not less than two (2) feet above the top of the arch or pipe. This shall be graded evenly across the trench. This amount of backfilling must be done at once, and in particular before any filling is deposited directly from a machine bucket, cars, wagons, or other vehicles. The backfilling shall be brought up evenly and all eccentric loading shall be avoided. In no case will dumping from a bucket be allowed to fall directly upon a sewer arch, conduit, or tile pipe; and in all cases the bucket must be lowered so that the shock of the falling earth will not injure the sewer structure.

The time elapsed before backfilling begins shall be subject to the approval of the Engineer. In all cases the backfilling shall be left with a smooth, even surface and a sufficient crown. All backfilling shall be carried along as speedily as possible, the trench

being filled as soon as the mortar and masonry are sufficiently set.

Where shown on the plans, or ordered by the Engineer backfilling shall done with sand, as specified under Item 23.

Rock.

(A15) For all rock excavation, the Contractor will receive a compensation of three dollars ($3.00) per cubic yard, as herein specified under Item 2.

Protection of Streets and Traffic.

(A16) The Contractor shall not block the free passage of vehicles and foot passengers on First Avenue or Twelfth Street. The sidewalks must not be obstructed, unless it is necessary for the execution of the work. Neither the materials excavated nor the materials or plant used in the construction of the work shall be so placed as to endanger the work or prevent free access to all fire hydrants, water valves, gas valves, manholes on electric, telegraph and telephone conduits, or fire alarm or police call boxes in the vicinity.

Care of Existing Structures.

(A17) All existing poles, trees, fences, sewer, water, gas or other pipes or conduits, electric, telegraph, telephone and other conduits and manholes or other structures in the vicinity of the work shall be supported and protected from injury by the Contractor, during the construction and until the completion of the work, except as hereinafter specified. The Contractor shall be liable for all damages done to such poles, trees, fences, pipes, and structures, as above provided, and shall save and keep the said Sanitary District harmless from any liability or expense for injuries, damages or repairs to the same.

The Sanitary District has placed a brick bulkhead in the sewer connections to which the suction well is to be connected. This bulkhead will be left in until the work under this contract is completed. It shall then be removed by this Contractor at his own expense, when ordered by the Engineer.

Repairing Ditches and Fences.

(A18) All ditches filled or damaged by the Contractor shall be repaired as the Engineer may direct, without delay, as soon as the work immediately adjacent is completed. All fences removed or damaged by the Contractor shall be replaced or repaired as the Engineer may direct, without delay as soon as the work immediately adjacent is completed.

Measurement.

(A19) All excavation will be measured in place inside the lines and grades given by the Engineer. Excavations for the connection to the inlet sewers, substructure of buildings, grit chamber, tanks, including aeration, settling and sludge tanks, pipe gallery screen chamber, outfall conduit, Venturi meter vaults, manholes, miscellaneous structures, etc., will be measured from the surface to the neat lines of the bottom of the structures or to such greater depths as the Engineer may order and between vertical planes starting from the outside neat lines of the base of the structure and extending upward vertically to the ground surface. Where this plane of measurement intersects intermediate benches or foundation elevations, the lines of measurement will follow along the intermediate bench to the outside of the structure at the new elevation and then on a vertical plane to the surface of the ground. A typical line of measurement is indicated on Sheet A-5 of the plans.

Excavations for cast iron pipe lines other than water pipes shall be measured between vertical planes two (2) feet farther apart than the inside diameter of the barrel of the pipe and from the surface of the ground to the elevation of the invert of the pipe. No allowance shall be made for bell holes, gates or other purposes.

All other excavation will be measured within the lines and grades actually given by the Engineer. No excavation shall be measured more than once, within the lines and grades actually given by the Engineer, even if two or more pipes or structures are built in the excavation.

No payment, however, will be made at the unit price for excavation specified to be paid under Item 1, for any excavation required in placing and laying macadam pavement, in laying 8-inch and 12-inch tile pipe, in laying tile underdrains, or in laying 6-inch cast iron water pipes, hydrants or gate valves.

No measurement will be made for excavation not to be paid for at the

unit price per cubic yard. The cost of such excavation shall be included in the prices to be paid under the respective items as above specified.

Payment.

(A20) The unit price specified to be paid per cubic yard for excavation under Item 1 shall include the excavation of all materials in place, other than rock, and shall include all clearing and grubbing, all backfilling to the lines and grades given by the Engineer, the disposal of all surplus material, all sheeting, shoring, and removal of water, and clearing up of the ground and the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 2—ROCK EXCAVATIONS.

Description.

(A21) It is not expected that any rock or large boulders will be encountered in the excavation. If such material is found, it will be paid for at the rate of Three Dollars ($3.00) per cubic yard, in addition to the unit price to be paid under Item 1 for earth excavation.

The Contractor shall excavate within the lines and grades shown on the plans or given by the Engineer and shall satisfactorily dispose of in fills or spoil banks, all ledge rock or boulders which cannot be handled with picks and shovels with reasonable facility. When placed in fills, the pieces of rock and boulders shall be kept separated so that the earth may fill solidly around them and prevent settlement later.

Measurement.

(A22) In estimating the number of cubic yards of rock work, the actual yardage of rock removed will be paid for as determined by the measurements of the Engineer. Boulders four (4) cubic feet and over in size will be measured as rock excavation. Hard pan, small boulders, clay, shale and similar material shall not be classed as rock, although it may be more economical to remove the same by blasting. The term "rock" is to be interpreted to include only large boulders, or solid limestone or sandstone rock in its original bed.

No claim for an amount of money in excess of the contract price of the work will be entertained or allowed on account of the character of the ground in which the trench or other excavations are made, except for the rock work heretofore specified.

Payment.

(A23) For all rock excavation occurring under this contract as herein specified, the unit price of Three Dollars ($3.00) per cubic yard will be paid under Item 2, in addition to the unit price to be paid under Item 1 for earth excavation, which sum is agreed by the Contractor to be full compensation for all labor, materials and appurtenances necessary to complete the work as specified.

ITEM 3—MACADAM PAVEMENT.

Description.

(A24) The Contractor shall construct a macadam roadway and gutter, as shown on the plans or as ordered by the Engineer, and to the lines and grades given by the Engineer.

The Contractor shall construct the macadam road at the beginning of the work, and shall maintain it in good condition to the completion of the work, without charge. He shall arrange his work so that the roadway is kept open and passable at all times, for other contractors.

Item 3 comprises the clearing of the areas to be paved, the preparation of the sub-grade, the construction of the macadam pavement, the maintenance of the work and all other items incidental thereto.

The price specified to be paid per square yard of finished macadam pavement shall include the furnishing of all labor, tools, material and appurtenances necessary to carry out the work as shown on the plans and as herein specified and to fully complete the pavement ready for use and traffic; and shall also include the providing of watchmen, signs, fences, red lights and all other precautionary measures necessary for the protection of persons and property, the clearing of the ground, the excavation and filling required to prepare the areas to be paved and all other work herein specified to be performed under Item 3.

Sub-Grade.

(A25) The Contractor shall clear the areas to be paved of all roots, trees, timbers, fences, pipes, debris or other obstacles and shall remove such materials from the site of the

work. He shall perform all excavations and all filling necessary to bring the sub-grade to the required elevations. All excavated materials shall be disposed of as specified in Section A13. Where filling is required the Contractor may place in the embankment suitable selected materials from the surplus excavation under Item 1.

All soft, spongy and yielding spots, and all vegetable or perishable material shall be entirely removed from the sub-grade and the space refilled with gravel, broken stone or other suitable material.

The sub-grade sixteen (16) feet wide shall be brought to a firm, unyielding surface by thoroughly rolling with a self-propelled roller weighing not less than ten (10) tons, and all portions of the surface of the sub-grade that are accessible to the roller shall be thoroughly tamped with a hand tamper about ten (10) inches in diameter, and weighing not less than fifty (50) pounds.

The sub-grade of the two (2) gutters each two (2) feet wide shall be rolled thoroughly with a hand roller weighing not less than six hundred (600) pounds per lineal foot of roller.

The shoulders for the gutters along both sides of the main sixteen (16) foot roadway constructed hereunder shall be rolled and compacted after the macadam has been placed and rolled as specified in section A26.

After the sub-grade is prepared the surface elevations of the same shall be determined, and if correct, accepted by the Engineer before any stone is deposited on it. If not correct, such alterations shall be made as are ordered to attain the desired grade.

Macadam.

(A26) Upon the sub-grade, sixteen (16) feet wide, prepared as herein specified, shall be spread a sufficient quantity of first-class limestone macadam of uniform size, to make a layer, when thoroughly rolled seven (7) inches thick. The broken stone shall have its diametrical axes as near as possible the same length, of a size to pass through a ring seven (7) inches in diameter, and be retained on a ring two (2) inches in diameter. The crushed stone shall be clean, hard, durable particles of stone free from loam, clay or organic matter, soft or micaceous pebbles or other impurities. Upon this layer of broken stone shall be spread a sufficient quantity of limestone screenings to fill all interstices and thoroughly bond the stone. The entire surface shall be thoroughly flooded with water and rolled with a ten (10) ton steam roller until the material is solidly compacted to a true, even surface.

Medium.

(A27) Upon the macadam specified in Section A26 shall be spread a layer of medium crushed limestone of a size to pass through a two (2) inch ring, but be retained on a one (1) inch ring. A sufficient quantity shall be placed to produce, when thoroughly rolled, a layer five (5) inches thick. Upon this shall be spread a sufficient quantity of limestone screenings to entirely fill all interstices and completely bond the medium crushed stone. The surface of the roadway shall then be kept well sprinkled and rolled with a ten (10) ton roller until the road is thoroughly and solidly compacted and no further settlement takes place.

The broken stone and screenings shall be crushed from hard, durable limestone, screened to the proper size, and free from loam, clay, and other foreign matter. All materials used in the macadam pavement and the methods of placing same shall be subject to the approval of the Engineer.

All surplus gravel, or surplus crushed stone, screenings or other debris shall be cleaned from the surface as ordered by the Engineer.

Upon the sub-grade prepared for the two gutters specified in section A25 shall be spread a layer of medium crushed limestone of a size to pass through a two (2) inch ring, but be retained on a one (1) inch ring. A sufficient quantity shall be placed to produce, when thoroughly rolled, a layer six (6) inches thick. Upon this shall be spread a sufficient quantity of limestone screenings to entirely fill all interstices and completely bond the medium crushed stone. The surface shall be kept well sprinkled and rolled with the hand roller specified under section A25 until thoroughly compacted and no further settlement takes place.

Maintenance.

(A28) The Contractor shall maintain the macadam pavement during the period of this contract, shall re-

pair the roadway embankments and pavements whenever depressions or other defects appear in same by placing and compacting additional filling material and paving material, and by performing other work thereon as the Engineer may direct, and shall leave the pavement in good condition and true to grade upon completion of all work hereunder.

Measurement.

(A29) No extra or customary measurements of any kind will be allowed in measuring the work under these specifications. The actual number of square yards of surface of macadam pavement placed will be measured by the Engineer and used in computing the square yards of macadam pavement to be paid for. Both the gutters and main sixteen (16) foot roadway shall be included for measurement.

No payment will be made at the unit price specified to be paid per cubic yard for excavation under Item 1 for any excavation made to construct the macadam pavement, complete, as specified under this item.

Payment.

(A30) The unit price specified to be paid per square yard for macadam pavement, under Item 3 shall include the excavation, filling and preparation of the sub-grade, furnished and placing of material, the rolling and compacting, disposal of all surplus excavation, cleaning up of ground, care of existing structures, maintenance, etc., as specified, and furnishing of all labor, material, appurtenances, etc., necessary to complete the work as specified.

ITEM 4—STONE WALKS.

Description.

(A31) The Contractor shall construct the crushed stone walks, as shown on the plans or as ordered by the Engineer, and to the lines and grades given by the Engineer.

Item 4 comprises the clearing of the area to be made into walks, the preparation of the sub-grade, the construction of the gravel or crushed stone walks, the maintenance of the work and all other items incidental thereto.

The price specified to be paid per square yard of finished gravel walk shall include the furnishing of all labor, tools, material and appurtenances necessary to carry on the work as shown on the plans and as herein specified, to fully complete the walks ready for use; and shall also include the providing of all precautionary measures necessary for the protection of persons and property, the clearing of the ground, the excavation and filling required to prepare the areas to be paved and all other work herein specified to be performed under Item 4.

Sub-Grade.

(A32) The Contractor shall prepare the sub-grade as specified in Section A25, so far as the same may apply. The roller used shall weigh at least two hundred (200) pounds per lineal foot of roller.

Medium.

(A33) Upon the sub-grade specified in Section A32 shall be spread a layer of medium crushed limestone of a size to pass through a two (2) inch ring but be retained on a one (1) inch ring. A sufficient quantity shall be placed to produce, when thoroughly rolled, a layer six (6) inches thick. Upon this shall be spread a sufficient quantity of limestone screenings to entirely fill all interstices and completely bond the medium crushed stone. The surface shall be kept well sprinkled and rolled with the hand roller specified in Section A32 until thoroughly compacted and no further settlement takes place. All material shall be of the quality specified in Section A27.

If gravel is used, the material shall be a bank gravel graded from fine to coarse and free from stones, which will not pass through a two (2) inch ring, and shall contain sufficient cementing material to make a firm, hard walk. It shall contain not more than 25 per cent of loam, clay, or other fine material which will pass through a screen having a clear mesh of one-quarter (¼) inch.

Maintenance.

(A34) The Contractor shall maintain the walks as specified in Section A28.

Measurement.

(A35) No extra or customary measurements of any kind will be allowed in measuring work under these specifications. The actual number of square yards of surface of stone walk placed will be measured by the Engineer and used in computing the

square yards of stone walk to be paid for.

No payment will be made at the unit price specified to be paid per cubic yard for excavation under Item 1 for any excavation made to construct the macadam pavement, complete, as specified under this item.

Payment.

(A36) The unit price specified to be paid per square yard for stone walks, under Item 4, shall include the excavation, filling and preparation of the sub-grade, furnishing and placing of material, the rolling and compacting, disposal of all surplus excavation, cleaning up of ground, care of existing structures, maintenance, etc., as specified, and furnishing of all labor, material, appurtenances, etc., necessary to complete the work as specified.

ITEMS 5, 6, 7—CONCRETE.

Description.

(A37) All concrete used in the construction of the sewage treatment plant, in the substructure of the buildings, the connection to the sewer inlet, grit chamber, screen foundations, aeration and sludge tanks, outfall to river, conduits, outfall, manholes and appurtenances shall be made and placed in accordance with the following general specifications, supplemented by the specifications under other headings and as shown on the plans or directed by the Engineer.

Proportions.

(A38) Concrete shall be divided into three (3) classes of mixtures, to be used as herein specified.

Class A concrete shall be composed of one (1) volume of cement, one and one-half (1½) volumes of sand, and three (3) volumes of gravel. If broken stone is used, Class A concrete shall be composed of one (1) volume of cement, one and one-half (1½) volumes of sand, and two and one-half (2½) volumes of broken stone. This shall be used in the west wall of the pump room, in the other walls of the pump room below elevation + 37 C. C. D., in the east and west walls of the pipe gallery and elsewhere as noted on the plans or ordered by the Engineer.

Class B concrete shall be composed of one (1) volume of cement, two (2) volumes of sand, and four (4) volumes of gravel. If broken stone is used, Class B concrete shall be composed of one (1) volume of cement, two (2) volumes of sand, and three and one-half (3½) volumes of broken stone. This shall be used in the inlet connection to the sewer, in roof over coal and ash pocket, floors, beams, and struts, galleries in pump room, basement and floor of blower room, grit chamber, aeration tanks, settling tanks, sludge tanks, conduits, and elsewhere as noted on the plans or ordered by the Engineer, except where Class A or C concrete is specified or ordered by the Engineer.

Class C concrete shall be composed of one (1) volume of cement, three (3) volumes of sand and six (6) volumes of gravel or broken stone. The filling around the 24-inch air pipe and 30-inch tile pipe, between the blower house and pipe gallery shall be Class C concrete, as shown on the plans or ordered by the Engineer, otherwise Class C concrete shall be used for filling, and other similar purposes only when and as ordered by the Engineer.

The sand and gravel or broken stone shall be so graded in size that the cement shall more than fill the voids in the sand, and the sand and cement shall more than fill the voids in the broken stone or gravel. One bag of cement, weighing at least ninety-four (94) pounds net shall be regarded as having a volume of one (1) cubic foot, and the sand and gravel shall be measured loose.

If required, the mixtures shall be modified as directed by the Engineer, by changing the relative volume of sand and ballast, but keeping the aggregate of the volumes of sand and ballast the same. The proportions shall be determined by volumes, the sand and ballast when measured being packed not more closely than by throwing them in the usual way into a barrel or box. Suitable measuring devices shall be provided by the Contractor. These shall be maintained and operated at all times in a manner to give the proportions of crushed stone or gravel, sand, and cement, as specified herein.

Portland Cement.

(A39) The cement shall be first-class Portland cement of a reputable brand satisfactory to the Engineer. It shall be delivered in cooperage or in bags and stored in weather-proof

buildings having a wooden floor raised above the ground, and sufficient stock shall be kept on hand to allow at least twelve (12) days for testing. All necessary facilities shall be provided by the Contractor to permit of the inspection of the individual shipments, each of which shall be kept separate. All unsatisfactory cement shall be promptly removed from the work. The cement shall conform to the most recent standard specifications of the American Society for Testing Materials, serial designation C9-17, as published in 1918. Tests will be made in general accordance thereto, with limits as follows:

Specific gravity shall be not less than three and one-tenth (3.1).

Fineness shall be such that seventy-eight (78) per cent shall pass through the number two hundred (200) sieve.

Time of setting. The cement shall not acquire its initial set in less than forty-five (45) minutes and must have acquired its final set within ten (10) hours.

Tensile strength. Briquettes after being kept the time specified shall develop a tensile strength per square inch as follows:

Age.	1 Cement, 3 Sand.
7 days	200 lb.
28 days	300 lb.

Soundness. Pats shall be satisfactory after storing one (1) day in air, followed by exposure to steam for five five (5) hours.

Sand.

(A40) Sand for concrete and mortar shall be silicious material, well graded from fine to coarse, and not more than six (6) per cent shall pass through a sieve having one hundred (100) meshes per lineal inch, and not more than five (5) per cent shall be retained on a screen having one-quarter (¼) inch holes. All sand shall be clean, hard, free from soft particles, vegetable matter or other deleterious material, and shall be subject to the approval of the Engineer. Screenings shall not be used as a substitute for sand in concrete or mortar.

Crushed Stone or Gravel.

(A41) Crushed stone or gravel shall consist of clean, hard, durable particles of stone, well graded between the limits of one-quarter (¼) and one and one-quarter (1¼) inch, with the diametrical axes as nearly as possible the same length, with all dust and all particles less than one-quarter (¼) inch removed. It shall be free from loam, clay, organic matter, soft or micaceous pebbles or other impurities. When directed, for thin sections of concrete, a finer stone than specified above shall be used, and for very heavy sections a coarser stone may be permitted.

The Contractor shall store and handle both sand and crushed stone or gravel in an approved manner to keep the material clean and free from foreign substances.

Water.

(A42) Water for mortar, concrete, flooding trenches and for all other purposes shall be provided by and at the expense of the Contractor and shall be free from oil, acid, strong alkalies or vegetable matter. Water from the Desplaines River shall not be used for concrete or mortar.

The Contractor shall note the provisions of Section A82.

Forms.

(A43) The Contractor shall provide suitable water-tight centers or forms with smooth surfaces of ample strength and rigidly braced. The bracing shall be entirely adequate to prevent deviations from the correct lines. No center or form shall be used which is not clean and of proper shape and strength and in every way suitable. Deformed, broken, or defective centers or forms shall be removed from the work. Before placing concrete, the forms shall be coated with vaseline, form grease or other suitable substance, approved by the Engineer, to prevent adherence of concrete. All forms and form lumber once used shall be thoroughly cleaned and recoated before being used again.

All wooden forms shall be built of clean, No. 1 yellow pine lumber, reasonably free from knots, dressed on all sides and neatly fitted. Tongued and grooved material shall be used where required. Not less than two (2) inch lumber shall be used in forms, except by express permission of the Engineer. The use of one (1) inch lumber will be permitted, if properly braced. The form surface shall be watertight, securely fastened by nails, screws or bolts to the ribs or supports.

All forms shall be thoroughly braced to keep them in exact position

and alignment during the placing and setting of the concrete. All wall forms shall have their sides tied together by wires or other approved ties, as far as possible.

On all horseshoe and circular sections of the outfall, conduits, sewer or sewer connections, the Contractor shall build first the bottom strip in the invert in the shape of a continuous block to support the forms in the trench. This block is to be molded, either in sections not over sixteen (16) feet long if end screeds are used with a longitudinal straight edge, or between parallel longitudinal screeds, all carefully floated to a true, smooth, hard finish and shall be thoroughly set before the forms are placed on it.

No centers or forms on any part of the work shall be struck without the consent of the Engineer.

The Contractor shall furnish a sufficient number of centers and forms so that the work can be prosecuted rapidly.

Templates.

(A44) The Contractor shall furnish and place all templates required for setting the foundation bolts required for any equipment to be erected by him under Item 21 of this contract, and for the electrical equipment to be furnished under Division P and for miscellaneous equipment to be furnished under Divisions C, V, X. These templates shall be carefully made to dimensions furnished by the Sanitary District, and shall be thoroughly checked by the Contractor when in place. The Contractor shall also set all anchor bolts required.

Wooden templates, as ordered by the Engineer, shall be furnished by the Contractor at his expense and no additional payment will be made therefor.

Mixing.

(A45) The concrete shall be mixed in an approved machine of the batch type, except that when relatively small quantities are to be used, resort may be had to hand mixing, but only by consent of the Engineer. Accurate measuring devices shall be used for proportioning the aggregate, cement and water. The mixing shall last at least two (2) minutes with each batch of concrete and not less than twenty (20) revolutions, and shall be thorough and continued until every particle of ballast is completely covered with mortar. The Contractor shall supply a clock or other means for determining the time of mix. When necessary to mix by hand, a watertight platform shall be used and ingredients shall be turned together at least six times, and until they are homogeneous in appearance and color. No concrete shall be placed after its initial set has occurred, and no retempered concrete shall be allowed to be used under any conditions. The mixtures shall be moderately wet, of a consistency to flow sluggishly into forms and around reinforcement and not to cause a separation of fine from coarse material in transportation from the mixer to the work.

Placing of Concrete.

(A46) After mixing, the concrete shall be transported rapidly to the place of deposit. It shall be carried up level along the whole length of the section under construction, and shall be so placed as to avoid rehandling within the forms. It shall be spaded or rammed into place and shall be thoroughly compacted around reinforcement, pipes, or other shapes built into the work. On the interior surfaces of the sewer connections, suction chamber, all interior walls of the substructure of the buildings, and on all exposed faces of the various tanks and connecting channels, grit chamber, screen foundations and pipe gallery, it shall be thoroughly spaded to bring rich mortar to the face. Particular care shall be taken at all points where water tightness is a prime requisite.

If a long spout is used in pouring concrete, the spout shall be wet with Portland cement mortar along its entire length before the first batch of concrete is released from the hopper, after each period when the spout is not in use.

Concrete shall not be placed in water nor shall water be allowed to rise over freshly placed concrete or mortar until the concrete or mortar has obtained final set.

Smooth Surfaces.

(A47) With the use of moderately wet concrete in the manner above specified, and with smooth water-tight forms, satisfactory surfaces shall be obtained for the interior exposed surfaces of the work. But if for any reason the surfaces have voids or are unduly rough, the walls shall be plas-

tered with Portland cement mortar, and floated to give a satisfactory appearance, or give a wash of neat Portland cement, applied with a whitewash brush, as the Engineer may direct. If required, before applying the mortar or wash, the surface shall be rubbed with a stiff wire brush until the surface presents a uniform appearance.

All inverts in all sewers and connections to sewers shall be given a thin coat of neat Portland cement, applied with a whitewash brush. On tile sewers, the upper surface of all manhole bottoms, including the sewer waterway, shall be carefully screeded to shape and troweled to a hard finish.

The underside of all roofs and concrete ceilings of all rooms shall be finished smooth for painting. If not sufficiently smooth the surface shall be rubbed with a stiff wire brush until the surface presents a uniform appearance and a wash of neat Portland cement shall be applied with a whitewash brush, if ordered by the Engineer.

Joints and Binding.

(A48) At joints the concrete last to be laid shall be suitably dovetailed, grooved or stepped, and upon resuming operations the joining surfaces shall be thoroughly cleaned and wetted, a bed of bond mortar being used one (1) inch thick, composed of one (1) part Portland cement and two (2) parts sand, thoroughly spread over the entire surface. On vertical joints keyways shall be set before pouring concrete. On all joints the reinforcing rods shall be set to extend into subsequent sections of construction, as shown on the plans. In general the work shall be poured as a monolith. Joints shall not be made except as the Engineer may direct to preserve the strength, or watertightness of the structures.

Where removable slabs are shown on the plans, or ordered by the Engineer, the Contractor shall make suitable joints by the use of tar paper or other approved material capable of making a clean non-adhesive joint.

Where steel water stops are ordered by the Engineer, to be placed in vertical joints, the Contractor shall furnish and place them, greasing one-half the surface as ordered. For such material, as and when ordered by the Engineer, the unit price per pound specified under Item 9 will be paid.

Finished Surfaces.

(A49) The concrete floor or invert of the suction chamber, grit chamber, screen foundation, shall be finished with a coating of mortar at least one-half (½) inch thick, placed upon the concrete before initial set has occurred. The mortar shall be composed of one (1) volume of Portland cement and two (2) volumes of torpedo sand. The surface shall be well screeded, floated, and troweled to a smooth hard face, true to line and grade.

The basement floors in the pump room and the floor of the operating gallery of the pump room basement shall be finished as above specified. The floor of the basements of the blower room pipe gallery, and the air screen room shall be troweled smooth. The main floor of the pump and blower house at or about elevation 45.5 shall be screeded to an even uniform surface, true to line and grade.

The tops of all walls, except those upon which concrete, brick or stone are to be placed, and the top of beams and walkways in the grit chamber, screen house, aeration, settling and sludge tanks shall be finished with a hard, troweled finish.

The exposed surface of the sloped bottoms of all the settling tanks (and the sludge tanks if poured in place) shall be troweled to a hard smooth finish.

The exposed surface of the bottom of the aeration tanks shall be screeded to an even uniform surface, true to line and grade.

Floors.

(A50) All floors in the pump and blower building shall be poured monolithic with the floor beams, as shown on the plans. The main floor of the pump room (at elevation 45.5) shall not be finally poured, as directed by the Engineer, until the installation of the pumps is completed. The Contractor shall, when ordered by the Engineer, complete the placing of the floor and neatly finish it against and around the pump castings and facings.

Where removable slabs are shown or ordered by the Engineer, joints shall be made as specified in Section A48.

Granolithic Floors.

(A51) The floor of the boiler room, ash and coal storage room, switch room, the operating floor of the pipe

gallery, and the roof of the coal and ash pocket rooms, as shown on the plans or specified, shall be surfaced with granolithic finish, with a special coating to prevent sanding. The surface course shall consist of a stiff mortar composed of one (1) volume Portland cement and one (1) volume of granite screenings, of approved quality; the largest particles of which would pass through a three-eights (3/8) inch ring, free from loam or other impurities. This course shall be placed before the concrete below has attained its initial set, laid to a full thickness of one (1) inch and carefully screeded, floated and troweled to a smooth, even surface. A dryer mixed in the proportion of two (2) volumes of Portland cement and one (1) volume of sand shal be sprinkled in a dry state over the surface and then floated and troweled smooth, after which, if directed, joints shall be cut and the surface indented as required. All granolithic surface shall be uniform in color. After the granolithic surface has been completed it shall be covered for three (3) days and kept moist by sprinkling with a fine spray of water.

After the operating floors of the pipe gallery and boiler room are dry and have been cleaned thoroughly, the Contractor shall apply a floor coating to harden and prevent sanding of the granolithic surfaces. The hardener is to be the Bay State cement floor coating, manufactured by Wadsworth, Howland & Co., or equal, applied according to the manufacturer's directions, using at least two (2) coats. The first coat shall be applied with a wide brush and full body to fill the pores of the concrete. After the first coat has dried at least forty-eight (48) hours, or otherwise as directed by the Engineer, the finish coat shall be evenly applied. Both first coat and finish coat shall be tinted as directed by the Engineer.

Pipe and Steps in Walls.

(52) Pipes, slants, sluice gate frames, anchor bolts, steps, or castings, as shown on the plans or as directed, shall be placed by the Contractor in the concrete. Special care shall be taken to place them to the proper lines and grades and to tamp thoroughly around them to prevent passage of water through the wall. They shall be placed before pouring concrete, as far as possible, and thoroughly braced to prevent movement during the progress of the work.

Care of New Work.

(A53) All exposed surfaces in finished and unfinished concrete shall be kept constantly moist by sprinkling with water at short intervals or covering with moistened burlap or by such other means as may be approved until the permanent covering is in place or until, in the opinion of the Engineer, the concrete is sufficiently hardened. No new work shall be laid during rainstorms. Freshly laid concrete shall be protected by canvas during storms to prevent the water from coming in contact with it. Sufficient canvas covering shall be kept ready at hand for this purpose.

Defective Work.

(A54) Should any voids or other defects be discovered in any part of the work when the forms are taken down, or otherwise, the defective work shall be removed and the space refilled with suitable material in a proper manner at the expense of the Contractor.

Placing Reinforcing Steel.

(A55) The Contractor shall furnish and place such reinforcing steel in the concrete as may be ordered by the Engineer, whether shown on the plans or not. The furnishing and placing of the reinforcing steel will be paid for at the unit price specified to be paid for reinforcing steel under Item 8.

Placing Material Furnished by the District.

(A56) The Contractor shall place in the concrete, at points to be indicated by the Engineer, any materials not included in this contract, which may be necessary to complete the work. All materials thus placed will be furnished on the ground at the site of the work by the Sanitary District at its own expense, but the Contractor shall perform such extra work in accordance with the provisions of Article 8. The Contractor shall carefully inspect all materials furnished by the Sanitary District, shall reject and set aside all cracked, broken or otherwise defective pieces discovered by him, and shall notify the Engineer in writing of the same within twenty-four (24) hours after the inspection. The Contractor will be held responsible for all materials furnished by the Sanitary Dis-

trict, after they have passed his inspection as being sound and until they are accepted in the completed work. Any cracked, broken, or otherwise defective pieces discovered after being inspected by him shall be replaced at his own expense.

No payment, however, will be made under this section for any work done in carrying out the provisions of Sections A59, A60, and A61, so far as they apply to concrete.

Concreting in Freezing Weather or at Night.

(A57) No concrete shall be laid at night or in freezing weather except by permission of the Engineer, and then with special precautions, satisfactory to the Engineer, to avoid the use of materials containing frost, or covered with ice, and to provide means to prevent the concrete from freezing until it is thoroughly set. The cost of all material furnished and labor employed that may be necessary or required by the Engineer to protect against freezing, shall be at the sole expense of the Contractor without extra charge therefor.

Grounds, Holes, Etc.

(A58) Where required, electrical conduits, plumbing and other work may be ordered placed in the concrete. Such material where not shown on the plans or specified will be furnished and placed by other contractors, when and as ordered by the Engineer. The Contractor shall aid the other contractors in such work in a reasonable manner without any additional payment therefor.

Holes shall be left in the concrete for pipes or other conduits which are not to be embedded, and such holes shall be protected with wrought iron pipe sleeves, which will be paid for at the unit price specified to be paid under Item 9.

Plumbing, Leaders, Etc.

(A59) The plumbing work, including hot and cold water piping, fixtures, heater, gas piping, drain piping, miscellaneous piping, etc., with rainwater leaders, leader heads, pressure piping for hydraulic gates, etc., will be furnished and placed by the Sanitary District under a separate contract. The Contractor, however, shall embed in the walls and floors or other parts of the building, both substructure and superstructure, any piping or other material whatsoever, and shall leave boxes, holes, etc., as required. He shall also assist in placing material, if required, and shall neatly close up, grout, repair or otherwise finish any openings, holes, etc., which shall be made.

Electrical Installation.

(A60) The electric wiring and conduits for both power and light, the telephone wiring and conduits and other miscellaneous electrical work will be furnished and placed by the Sanitary District under a separate contract. The Contractor, however, shall embed in the walls and floors or other parts of the building, both substructure and superstructure, any conduits, ducts, boxes, or other material, whatsoever, and shall leave boxes, holes, etc., as required. He shall also assist in placing material, if required, and shall neatly close up, grout, repair or otherwise finish any opening, holes, etc., which shall be made.

Patching, Plastering and Cleaning Up.

(A61) After the plumbing, electrical, and all work under this contract is completed, the Contractor shall clean up the work, as specified in the particular sections, and shall also patch all damaged places, plaster in holes, and repair generally to leave the completed work in first class condition, free from all defects.

Watertightness of Concrete Work.

(A62) The walls and floors of the pump suction chamber, walls and floors of the coal and ash pocket and pump room and blower room basement shall be constructed with as few joints as possible. Great care shall be taken where joints are necessary to make them watertight, and also at all points where pipes or castings pass through the walls or floors. When the concrete work has attained sufficient strength, and before any painting is done, the suction chamber shall be filled with water to elevation +42 above Chicago city datum. The Contractor shall repair any imperfections which cause the water to fall in the suction chamber at a rate of more than one-half (½) inch in twenty-four (24) hours. All interior walls or floors of the pump room, blower room basement and coal and ash pocket shall be practically bone dry. All places in the foregoing rooms which show appreciable seepage,

weeping or moisture shall be made perfectly watertight, even if the preceding requirement for tightness is fulfilled.

The grit chamber, screen substructure, aeration tanks, settling tanks and sludge tanks shall be constructed with as few joints as possible. Great care shall be taken where joints are necessary to make them watertight, and also at all points where pipes or castings pass through the walls or floors particularly in the pipe gallery between the aeration and settling tanks. At the close of the work, all the tanks, grit chamber and screen substructure shall be filled with sewage to the working water line. The Contractor shall repair any imperfections which cause the water to fall at a rate of more than one (1) inch in twenty-four (24) hours. The walls and basement floor of the pipe gallery shall be practically dry. All noticeable leaks in the work shall be repaired in any case, even if the preceding requirements for tightness are satisfied.

Measurement.

(A63) Concrete for payment will be measured only inside the lines and grades given by the Engineer, and only the net cubical contents thus placed will be allowed. Deductions will be made for all openings in the concrete. All concrete placed outside these lines and grades to fill unauthorized excavation, as specified in Section A8, and all concrete used for replacing defective work shall be at the expense of the Contractor.

In general, payment, will be made only for the yardage comprised in the walls, floors, beams, conduits, etc., as specified by the neat lines of the structure, as shown on the plans, except where said plans have been changed by order of the Engineer.

Payment.

(A64) The unit price specified to be paid per cubic yard for concrete, Class A, B and C, under Items 5, 6 and 7 respectively, shall not include the materials specified in Section A56, which will be furnished by the Sanitary District, but shall include the handling and placing of such materials in the concrete, and further shall include the furnishing and placing of the concrete and the furnishing of all labor, tools, materials (other than as above stated) and appurtenances necessary to complete the work as specified.

ITEM 8—REINFORCING STEEL.

Description.

(A65) The Contractor shall furnish and place in the concrete, steel bars, as specified, for reinforcement, of the size called for on the plans, or as ordered by the Engineer, at such points as are shown or as may be required. Corrugated, twisted, or deformed bars may be used, of a form to be approved by the Engineer.

The Contractor shall also furnish the spiral reinforcing required in columns.

Placing.

(A66) The Contractor shall supply all necessary wiring, supports, and labor to put the reinforcement in place, fasten it securely and keep it in place while concrete is being laid. In general, all rods shall be placed with the center two (2) inches from the form. In columns and beams, the rods shall be placed with the center three (3) inches from the form. Concrete spacing chairs shall be furnished to hold them in position. These shall be of the Securo Supporting and Locking Bar-spacer type or equal in all beams and slabs. The Contractor shall place the bars as shown on the plans or in accordance with instructions of the Engineer. The bars shall be cut and bent as required, and wired together at intersections as often as necessary. Bars shall preferably be bent in the shop or mill to the forms shown on the plans. All bending shall be accurately done as shown on the plans and by methods and appliances approved by the Engineer. Adjoining bars at splices shall overlap at least forty (40) diameters, and steel rod clamps shall be provided and placed where shown on the drawings or ordered by the Engineer. In all beams, bars of single length shall be used.

On any section of the work where horizontal bars run further than the length of the forms, the form or head against which the work ends shall be perforated at the proper places to allow the bars to project through a distance at least equal to the lap specified. The projecting ends, however, shall be of different lengths so that in no place will laps in adjoining bars in the same place occur opposite each other. Floor bars shall extend at least four (4) inches beyond the face

of the wall supporting the floor and beam bars at least eight (8) inches.

Quality.

(A67) Steel for reinforcing bars to be imbedded in concrete shall be corrugated, twisted, or deformed bars of the size called for on the plans, or of equivalent section, and of a form approved by the Engineer. Bars shall be free from defects and kinks, and from bends not shown on the plans. Bars shall be rolled from open hearth steel billets (not rerolled material), and shall conform in all respects to "Standard Specifications for Billet Steel Reinforcement Bars" adopted by the American Society for Testing Materials in 1911, and revised in 1912, 1913 and 1914. Deformed bars shall be of the grade therein specified as "Intermediate Grade." All tests shall be made on the finished bars as furnished for the work under this contract, and at least one tensile and one bending test shall be made from each melt of steel from which bars are furnished for this work, or from each lot of ten (10) tons or less of bars. Specimens for test shall be so taken as to represent as nearly as possible the average of the bars furnished.

Spiral reinforcing shall be of the quality specified above for bars, of manufacture approved by the Engineer.

All bars shall be new stock, free from rust scale or excessive rust when placed in the work. A thin coating of red rust resulting from short exposure will not be considered objectionable when bars are placed in the work, but any bars having rust scale or a thick rust coat shall be thoroughly cleaned satisfactorily to the Engineer, or shall be rejected and removed from the premises upon the order of the Engineer. All bars shall be stored in racks and protected from the weather after delivery at the site of the work.

Ordering.

(A68) All reinforcing metal shall be furnished by the Contractor only by order of the Engineer, and in such lengths and quantities as the Engineer shall specify in such order, and the Contractor shall notify the Engineer when he desires such order given by him. The Contractor shall not be entitled to any claim for damages for delays that may result from failure to so notify the Engineer.

Reinforcing steel will be inspected by the Sanitary District at the mills at which it is rolled (unless furnished from stock) and the Contractor shall furnish, free of charge, the use of a testing machine capable of properly testing the prepared specimens. Specimens for testing of material, and also the necessary labor at the mill shall be furnished without charge when called for by the Engineer or his authorized representative, either of whom shall have full power to reject all material which does not conform to the specifications.

Stock material shall be used for reinforcing bars which cannot be rolled in time to be used in various parts of the work. In case the records of the chemical analysis and physical tests of such stock material are not available, a reasonable number of tests of the same shall be furnished free of charge, sufficient to satisfy the Engineer of its quality.

Payment.

(A69) The unit price specified to be paid per pound under Item 8 shall include all labor, tools, materials, and appurtenances necessary to furnish and place all reinforcing steel. The weight of steel paid for shall be the scale weight for all steel actually placed in the work, no allowance being made, however, for wire ties, clips or other devices used to tie pieces together for support during construction.

ITEM 9—MISCELLANEOUS STEEL.

Description.

(A70) The Contractor shall furnish, fabricate, and place miscellaneous steel required for floor plates, gratings, bar screen, steel ladders, manhole rungs and any other miscellaneous steel work shown on the plans or specified herein, necessary to complete the work when and as ordered by the Engineer. No payment, however, will be made under this item for any steel work used in floor beams, trolleys, pipe hangers or supports, air piping, sludge piping, sewage piping, water piping, or bracing for bilge pump shafting or any of the steel work covered by Items 17, 18, 19, 20 and 21, unless specifically mentioned therein.

Materials and Workmanship.

(A71) All structural steel shall conform in every respect with the requirements of the "Standard Specifications for Structural Steel for Buildings," Serial Designation A9-16, of the American Society for Testing Materials. All workmanship shall be first-class in every respect and must conform to the latest and best practice. All material must be thoroughly straightened in the shop by methods that will not injure it before templates are placed on same for laying off and before any work is done upon it. Finished members must be absolutely straight and free from open joints and distortions of any kind. All shearing shall be neatly and accurately done and parts exposed to view shall be neatly finished. All necessary fillers, connections, and other minor details, not shown on the plans, but necessary for the work, shall be furnished without extra charge. All material shall be kept clean and protected from the weather. All bent pieces shall be carefully bent to shape.

Pipe spacers, pipe sleeves, tie rods, bolts, rivets and other miscellaneous parts shall be furnished as required, of suitable material, when ordered by the Engineer.

Ladders and Manhole Steps.

(A72) The ladders shown on the plans or ordered by the Engineer are to be furnished and placed in a careful manner. The vertical bars are to be two and one-quarter (2¼) inch by one-half (½) inch and round rungs three-quarter (¾) inch diameter. The rungs are to be set twelve (12) inches on centers, and are to be turned to a shoulder and headed over as shown in the plans. The wall supports are to anchor bolts set at proper intervals.

The manhole steps are to be made of genuine wrought iron, cut and bent to shape, and then heavily galvanized.

Cleaning and Painting.

(A73) All the steel work shall be thoroughly cleaned and painted before rusting begins. Prior to assembling, all parts which would be inaccessible when assembled, shall be painted with red lead paint herein specified. Unless otherwise directed by the Engineer, all steel (except manhole steps) shall be given one (1) heavy coat of red lead paint well brushed in, before removal from the shop. The shop coat of paint shall consist of red lead and raw linseed oil mixed in the proportions of twenty-five (25) pounds of dry red lead or thirty-five (35) pounds of red lead paste, to each gallon of linseed oil, with the addition of not more than one-half (½) pint of pure turpentine or turpentine Japan dryer, mixed as directed. In the field, before or after erection, as ordered by the Engineer, all steel work shall be given two (2) coats of asphaltum varnish or other approved rust-resisting paint.

Weight.

(A74) The weight of miscellaneous steel to be paid for, shall be the actual scale weight of the steel work as delivered.

The Contractor shall provide all necessary facilities for the determination of the correct scale weight of all material by the Engineer. In no case shall the total weight of metal to be paid for exceed the total weight of such metal as calculated from the shop plans by more than two and one-half (2½) per cent.

Payment.

(A75) The unit price specified to be paid per pound for miscellaneous steel shall include the furnishing and placing of the steel and shall include the furnishing of all labor, tools, material and appurtenances necesarry to complete the work as specified.

ITEM 10—IRON CASTINGS.

Description.

(A76) The Contractor shall furnish and place cast iron castings required for circular or rectangular cast iron frames and covers for manholes and catch basins, frames for floor plates, floor cast iron plates, edging stop plank grooves, lamphole castings, and any other iron castings shown on the plans, or specified herein, necessary to complete the work, as and when ordered by the Engineer. No payment, however, will be made under this item for any cast iron used in machinery of any kind, in gate valves, hydrants, sewage screens or any part thereof, or for any castings in the screen chamber or for water pipes, soil pipes, or other appurtenances to water piping, valve boxes, or other similar work. No payment will be made under this item for any iron castings

used in any work under Items 17 to 21, inclusive, unless specifically mentioned therein.

The Contractor shall also furnish and tap into the stop plank grooves, bronze tap bolts and nuts, as shown on the plans, the cost of which shall be included in the unit price paid per pound under Item 10.

Cast Iron.

(A77) All castings shall be of tough, close grained gray iron, free from blowholes, shrinkage, and cold shuts. They shall be sound, smooth, clean and free from blisters and all defects. All castings shall be made by the cupola process.

Workmanship.

(A78) All castings shall be made accurately to dimensions shown and shall be planed where marked or where otherwise necessary to secure perfectly flat and true surface. Allowance shall be made in the patterns so that the specified thickness shall not be reduced. Manhole covers and floor plates shall be true and shall seat at all points.

The top of each circular manhole shall be checkered and perforated as shown on the plans. Around the outside edge, the top of the cover for a width of one (1) inch shall be left plain and flush with the top of the checkering. There shall be cast on each cover in raised letters, at least two (2) inches long, the initials "S. D. C." The top of other manhole and floor opening covers shall be checkered or marked as shown on the plans. Floor plates shall be checkered and ribbed as required by the Engineer.

Cleaning and Painting.

(A79) All castings shall be thoroughly cleaned and painted before rusting begins and before leaving the shop with two (2) coats of high grade asphaltum or other suitable varnish that the Engineer may direct. After the castings have been placed in a satisfactory manner, all foreign adhering substances shall be removed and the castings given two (2) additional coats of asphaltum or other varnish as directed by the Engineer.

Weight.

(A80) No casting shall be accepted the weight of which shall be less than that due to its dimensions by more than five (5) per cent. The Contractor shall furnish scales and every facility for weighing the castings in the presence of the Engineer.

Payment.

(A81) The unit price specified to be paid per pound for iron castings shall include the furnishing and placing of the iron castings and shall include the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 11—6-INCH WATER PIPE.

General.

(A82) The Contractor shall furnish and lay the 6-inch cast iron water pipe from the main on First Avenue near 12th Street, at the south boundary of Maywood, to the pumping station, as shown on the plans or as specified herein. The Contractor shall lay this pipe for his own use during construction as soon as possible after the bond is approved. The Contractor shall maintain the pipe during the progress of the work, and upon completion of the work he shall make such repairs as may be necessary to put the pipe in first-class condition before final acceptance.

The Contractor shall arrange his water pipe system so that water may be taken from it for use by any other contractor. Water so used, however will be metered and all water used by other contractors will be paid for, if measured by the meter of the Contractor under Division A, at the same rate as paid by him. The Contractor under Division A shall install his own meter for measuring all water used by him, said meter to be satisfactory to the President of the Village of Maywood. The Contractor shall further pay all charges made by the Village of Maywood for water used by him at the rates fixed by the Village of Maywood.

Included unter Item 11 shall be the cost of cutting the existing 6-inch pipe in Maywood, furnishing and placing the necessary special fitting and connecting up, together with the furnishing and placing of three (3) six (6) inch gate valves, one (1) gate box, and two (2) fire hydrants, as shown on the plans and specified herein. The pipe shall be carried through the wall of the boiler room to a point given by the Engineer. The hydrant shall be connected up by a branch line, running into the basement, at a point

designated by the Engineer. The Contractor shall also extend the 6-inch pipe from the boiler room to the outside wall of the pipe gallery. He shall also furnish and place two (2) six (6) inch gate valves inside the boiler room at points designated by the Engineer.

Clearing, Trimming, Excavation, Etc.

(A83) The site of the excavation shall be cleared, and excavation, backfilling, resurfacing, restoration of sidewalks, crossing, etc., carried on as specified in Sections A3 to A23 inclusive, in so far as they may apply.

The cost of all excavation for water pipe shall be included in the unit price specified to be paid per lineal foot of water pipe. No additional payment will be made for excavation at the unit price specified under Item 1.

Cast-Iron Pipe and Specials.

(A84) All cast-iron pipe furnished shall be in accordance with the latest standard specifications of the American Water Works Association. The pipe shall be Class B. Whenever the pipe requires cutting, the work shall be done by the Contractor, without further compensation, in a manner satisfactory to the Engineer.

All specials furnished shall be in accordance with the latest standard specifications of the American Water Works Association. All specials shall be Class D. Sleeves and plugs shall be furnished as required.

Placing of Pipes.

(A85) All pipes must be laid on a good foundation, trimmed to shape, and, where required, secured against settlement in a manner approved by the Engineer.

In general, excavation shall be made so as to place the outside top of the pipe at a depth of five (5) feet six (6) inches below the top of the curb, or where no curb exists, below the established grade of the street or at the grade given by the Engineer. At pipe or special joints, enough additional depth shall be excavated to permit the making of the joint in a proper manner. In all cases the pipe shall be laid to a depth fixed by the Engineer.

Laying.

(A86) Proper and suitable tools and appliances for the safe and convenient handling and laying of the pipes and special castings shall be used. Great care shall be taken to prevent the pipe coating from being damaged, particulary on the inside of the pipes and special castings. All pieces shall be carefully examined for defects and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound one in a satisfactory manner by the Contractor at his own expense. The pipes and special castings shall be thoroughly cleaned before they are laid, shall be kept clean until they are accepted in the completed work, and when laid shall conform accurately to the lines and grades given by the Engineer.

Lead Joints.

(A87) In jointing the pipes and special castings, the spigot of each piece shall be properly seated in the bell of the next adjacent piece and adjusted so as to give a uniform space for the joint, which will be made with twisted or braided hemp packing and soft pig lead. The packing shall be thoroughly driven into the bell so that the lead, after having been calked, shall have a depth of at least two (2) inches for pipes. The melting pot shall be kept near the joint to be poured and each joint shall be made at one pouring. Dross shall not be allowed to accumulate in the melting pot.

The joints shall be thoroughly calked by competent mechanics and in such manner as shall secure a tight joint without overstraining the iron of the bells.

Testing.

(A88) Wherever conditions will permit, in the opinion of the Engineer, before the trench is back-filled, the pipe shall be tested by filling it with water under a hydrostatic pressure of one hundred (100) pound per square inch. This pressure shall not drop more than ten (10) per cent in one (1) hour with all valves and connections shut. The Contractor shall furnish, at his own expense, all apparatus, water and appliances necessary or proper for all tests, except the gages. All joints shall be examined during the open trench test and all visible leaks stopped.

Gate Valves.

(A89) All gate valves furnished under this item shall be of the double-

seated type. with non-rising stems and a circular waterway of the full diameter specified. They shall be provided with hubs of proper dimensions to fit the cast iron pipe furnished. All gate valves shall be bronze-mounted, and all bearing surfaces shall be of bronze or faced with bronze.

All cast-iron shall be of the same quality as that specified for cast-iron pipe. Bronze shall be of the best quality, compact and homogeneous, of such mixtures as will produce the best results for each particular part. All valve and seat rings shall be of hard mixture, and the valve stems shall be of Tobin bronze or other approved mixture.

All gates and seat rings shall be carefully and firmly secured in place. The iron castings shall be machined where the rings bear and the backs of the rings shall be machined all over. After the rings have been fastened securely in place, the front shall be machined all over to a perfectly true and smooth bearing, after which they shall be hand scraped to a water-tight joint. Each ring shall be cast in one piece. Threads of gate valves shall be lathe-cut and half-V pattern. The gate valves shall be provided with stuffing boxes constructed with bolt followers and so arranged as to be readily accessible. They shall have brass and bronze bolts and be left packed ready for use on the completion of the work. All gate valves shall have a square nut. All wrought iron bolts shall be made from the best American refined bar iron, with good well-fitting threads and cold-pressed nuts. All bolt heads and nuts shall be hexagonal of United States standard sizes, neatly trimmed and chamfered.

All cast-iron surfaces of valves outside and inside shall be thoroughly cleaned and coated with asphaltum varnish, applied hot, or other approved metal coating. All bronze tool-finished work shall be left bright.

All valves shall be built to operate continuously under a working pressure of at least sixty (60) pounds per square inch, and shall be tested in the shop under test pressures at least fifty (50) per cent greater than the working pressure above specified. A certificate from the manufacturer that the above tests have been sucessfully withstood shall be furnished by the Contractor.

Valve Boxes and Vaults.

(A90) For valves laid in the trench there shall be furnished, as ordered by the Engineer, a cast-iron valve box of approved heavy pattern, with suitable cover, of the standard pattern used by the Chicago Water Department. The valve box shall be adjustable in height, and shall cover the stuffing box and cap of the valve thoroughly. The valve box shall be thoroughly coated with three (3) coats of approved asphaltum varnish.

Hydrants.

(A91) The Contractor shall furnish and place two (2) fire hydrants to be used on sixty (60) pounds working pressure, of six (6) inch nominal size with a bell connection for a six (6) inch cast iron pipe, the center of the bell to be five (5) foot six (6) inches below the surface of the ground. The hydrant shall be provided with two two and one-half (2½) inch hose nozzles and one (1) four (4) inch steamer nozzle. All nozzles shall be of bronze with male hose threads, and shall be provided with iron nozzle caps and chains. The hose threads shall correspond with those in use in the Fire Department of the City of Chicago. The hydrants shall be of the sliding gate type. The drip outlet shall be so arranged that the moment the gate commences to open the outlet shall be sealed and shall remain sealed until the gate is closed. All parts connected with the drip outlet shall be of solid bronze, and the mountings and seats shall be bronze throughout. The gates shall be rubber faced. The hydrants shall be designed so that all working parts can be readily removed without digging up or disturbing the hydrant or its connections. All hydrants shall close by turning to the right. All cast iron surfaces inside and outside shall be coated with asphaltum or other approved coating. The hydrants shall be tested for one hundred and fifty (150) pounds pressure. The operating nut and nozzle cap shall be five-sided of standard size.

At each hydrant the Contractor shall furnish and place, as directed by the Engineer, one (1) cubic yard of clean crushed limestone, one and one-quarter (1¼) to two (2) inches in nominal size.

Measurement.

(A92) The length of pipe laid, to be paid for, will be the length measured along the axes of the pipe laid in place. No additional payment will be made for specials, valves, hydrants, or valve boxes placed in the line.

Payment.

(A93) The unit price specified to be paid per lineal foot under Item 11, for the laying of the 6-inch water pipe, shall include the furnishing and handling of the pipe, specials, valves, valve boxes, hydrant and crushed stone, the laying in place, furnishing, placing and calking of lead in joints, excavation, backfilling and removal of surplus material, resurfacing of streets, restoration of sidewalks and crossings, the making of all service connections to hydrants, the connection at 12th Street to the main of the Village of Maywood and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 12—CAST-IRON PIPE.

General.

(A94) Under this item the Contractor shall furnish and lay miscellaneous cast-iron pipe, as shown on the plans, or as specified herein. No payment will be made under this item for any cast-iron pipe in the cast-iron water pipe, pump suctions, sewage force main, float tubes, air piping, or piping in pipe gallery, aeration tanks, settling tanks or sludge tanks, which are specified to be covered by Items 11 and 17 to 21, inclusive. Included under this item, however, are the cast-iron pipe laid under the road and walks for culverts or to inlet, basins, the 18-inch culvert at First Ave., the 12-inch and 18-inch cast-iron pipe in the main drain from the sludge concentration tanks to the suction chamber.

Cleaning, Trimming, Excavation, Etc.

(A95) All excavation shall be carried on as specified in Section A3 to A23, inclusive, in so far as they may apply, and will be paid for at the unit prices specified for earth and rock excavation, under Items 1 and 2, respectively. Where cast-iron pipe under this Item is laid in excavation with other pipes, conduits, or structures, the excavation will be measured only once, for the entire cross section of the excavation, to the lines and grades given by the Engineer. No additional measurement shall be made, because more than one structure or pipe is placed in a common excavation.

Cast-Iron Pipe, Specials, Placing of Pipe, Laying, Lead Joints.

(A96) The cast-iron pipe, specials, placing of pipe, laying, and lead joints shall be carried out as specified in Sections A82 to A88, inclusive, so far as they may apply. Wall castings shall be furnished where required. Flanged pieces shall be supplied, faced and drilled, where shown on the plans or ordered by the Engineer.

All pipe shall be Class A, and specials shall be of the lightest class of the American Waterworks Association Standard specifications.

Testing.

(A97) The sludge drain line shall be tested with twenty (20) pounds pressure.

All tests shall be made as specified in Section A88, in so far as the same may apply. No other lines of pipe will be tested.

Measurement.

(A98) The length of the pipe laid, to be paid for, will be the length measured along the axes of the pipe laid in place. No additional payment will be made for specials, valves or sluice gates placed in the line.

No measurement will be made under this item for cast-iron pipe or specials used in water pipe, pump suctions, sewage force main, float tubes, air piping, or piping used in pipe gallery, aeration tanks, settling tanks, or sludge tanks, that is, for any or all material which is specified to be furnished and paid for under Items 11, 17, 18, 19, 20 and 21.

Payment.

(A99) The unit price specified to be paid per pound under Item 12 for the furnishing and laying of cast-iron pipe, shall include the furnishing and handling of the pipe and specials, the laying in place, furnishing, placing and calking of lead in joints, testing, and shall include the furnishing and placing of all labor tools, materials and

appurtenances necessary to complete the work as specified.

ITEM 13—VITRIFIED SEWER PIPE, 8-INCH.
ITEM 14—VITRIFIED SEWER PIPE, 12-INCH.

Description.

(A100) The Contractor shall furnish and lay as required eight (8) inch and twelve (12) inch vitrified sewer pipe under Items 13 and 14 respectively as shown on the plans, and at such other points as may be shown or required, with bends, branches, or other specials as may be necessary to complete the work.

Excavation.

(A101) All excavation shall be carried on as specified in Sections A3 to A23, inclusive, insofar as they may apply.

The cost of all excavation shall be included in the unit prices specified to be paid per lineal foot of the tile under Items 13 and 14. No additional payment will be made for excavation at the unit price specified under Item 1.

Quality.

(A102) All sewer pipe shall be standard quality, made of the best material, thoroughly and perfectly burned, of homogeneous texture without cracks or imperfections, well glazed, so that their inner and outer surfaces shall be smooth, hard, and even.

Dimensions.

(A103) The pipes shall be at least two (2) feet in length. Shorter or cut lengths shall be used only where necessary to make closures. Branches, bends and other specials, where so shown or required, shall be made to dimensions furnished by the Engineer. All pipes shall be straight, true in form, of full diameter throughout, and shall have deep and wide socket joints. The thickness of the pipe and dimensions of the deep and wide socket shall be at least equal to those of single strength standard sewer pipe of the same diameter for sizes from four (4) inch up to and including twelve (12) inch pipe.

Laying.

(A104) All pipes shall be laid true to the lines and grades given by the Engineer. The ends or shoulders of each pipe shall abut against the next adjacent pipes in such a manner that there will be no unevenness of any kind along the bottom half of the pipes.

Joints.

(A105) The space between the pipe and socket shall be as uniform as possible and made water-tight by first using a small jute gasket thoroughly saturated with neat Portland cement, carefully coiled and placed in the bell of the pipe. The joints shall then be thoroughly filled with Portland cement mortar, made of equal volumes of cement and clean, sharp, screened sand thoroughly mixed dry, the cement and sand to be of the quality specified in Sections A39 and A40, sufficient water being afterwards added slowly to give the proper consistency. Mortar shall be used as soon as made. It shall be solidly rammed into the joints, after which the joints shall be carefully wiped inside and out.

Interior of Pipe.

(A106) The interior of the pipe shall be carefully freed from all dirt, cement, or superfluous materials, of every description as the work proceeds, for which purpose a disc mold or swab filling the entire bore of the pipe, and attached to a rod sufficiently long to pass two (2) joints from the ends of the pipe last laid shall be continuously worked through as the laying of the pipe proceeds. In all cases, the open ends of the pipes and branches shall be temporarily and securely closed with carefully fitted boards or stoppers to prevent any earth or other substance from entering. The Contractor shall make good all defects and remove any foreign matter which may have been left in or otherwise introduced into the pipe before the final acceptance of the work.

Future Inlets.

(A107) Tile pipe shall be built into the sewer or conduits at points shown on the plans, to provide entrance for existing and future connections. At future connections, the bell end of the tile shall be blanked off with tile blanks, brick or a thin concrete slab cast outside and seasoned. These shall be included in the unit price specified to be paid for the items wherein specified. The blanks shall fit neatly in the open bell of the pipe and shall be made tight with cement mortar or a suitable asphalt or com-

position joint filler applied hot. The cost of making such joints, cutting and placing the tile shall be included in the price specified to be paid under the items wherein specified.

Measurement.

(A108) The length of vitrified sewer pipe, laid, to be paid for under Items 13 and 14, will be the length measured along the axes of the pipe laid in place. No additional payment will be made for specials, placed in the line, which may be necessary to complete the work.

Payment.

(A109) The unit price specified to be paid per lineal foot under Items 13 and 14 for the laying of the vitrified sewer pipe shall include the furnishing and handling of vitrified sewer pipe and specials, the laying in place, making joints, excavation, backfilling, and removal of surplus material, and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 15—VITRIFIED SEWER PIPE, 30-INCH.

Description.

(A110) The Contractor shall furnish and lay as required thirty (30) inch vitrified sewer pipe under Item 15, as shown on the plans, and at such other points, as may be shown or required, with bends, branches, or other specials as may be necessary to complete the work.

Excavation.

(A111) All excavation shall be carried on as specified in Sections A3 to A23, inclusive, insofar as they may apply, and will be paid for at the unit price specified for earth and rock excavation under Items 1 and 2, respectively. Where 30-inch vitrified sewer pipe under this Item is laid in excavation with other pipes, conduits or structures, the excavation will be measured only once, for the entire cross-section of the excavation, to the lines and grades given by the Engineer. No additional measurement shall be made, because more than one structure or pipe is placed in a common excavation.

Where 30-inch vitrified sewer pipe under this Item is laid in a separate trench the excavation will be measured between vertical planes two (2) feet farther apart than the inside diameter of the pipe barrel, and from the surface of the ground to the elevation of the invert of the pipe. No allowance shall be made for bell holes.

Quality, Dimensions, Laying, Joints, Interior of Pipe.

(A112) The tile pipe shall be furnished and laid as specified in Sections A96 to A100, inclusive, so far as the same may apply, with the exception that the thickness of the pipe and the dimensions of the deep and wide socket shall be at least equal to those of double strength deep and wide socket sewer pipe of the same diameter.

A cradle of Class C concrete shall be placed under the pipe as shown on the drawings. This will be paid for at the unit price specified under Item 7.

Measurement.

(A113) The length of 30-inch vitrified sewer pipe, laid, to be paid for under Item 15, will be the length measured along the axes of the pipe laid in place. No additional payment will be made for specials, placed in the line, which may be necessary to complete the work.

Payment.

(A114) The unit price specified to be paid per lineal foot under Item 15 for the laying of 30-inch vitrified sewer pipe, shall include the furnishing and handling of the vitrified sewer pipe and specials, the laying in place and making joints, and shall include the furnishing and placing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 16—TILE UNDERDRAINS.

Description.

(A115) Under Item 16, the Contractor shall furnish and lay as required four (4) inch tile underdrains as shown on the plans and at such other points as may be shown or required.

Excavation.

(A116) The site of the excavation shall be cleaned and excavation, backfilling, resurfacing, etc., carried on as specified in Sections A3 to A23, inclusive, insofar as they may apply.

The cost of all excavation shall be included in the unit price specified

to be paid per lineal foot of tile underdrain. No additional payment will be made for excavation at the unit price specified under Item 1.

Underdrain.

(A117) All underdrain tile shall be of standard quality, for (4) inch internal diameter farm tile, made of the best material, well burned, unglazed, without bells. The pipe shall be at least one (1) foot in length. All pipes shall be straight, true in form and of full diameter throughout.

Laying.

(A118) All underdrain tile shall be laid true to the lines and grades given by the Engineer. The ends of each piece of underdrain tile shall be lined up closely, leaving a space not over one-quarter (¼) inch between adjacent underdrain tile. The pipe shall be laid on as even a grade as possible. Care shall be taken in backfilling to place the dirt around the body of the tile, and to keep the finer material away from direct contact with the joints. The backfilling shall be carried on as specified in Section A14.

Measurement.

(A119) The length of underdrain tile, laid, to be paid for will be the length measured along the axes of the pipe laid in place.

Payment.

(A120) The unit price specified to be paid per lineal foot under Item 16 for the laying of underdrain tile, shall include the furnishing and handling of the tile, the laying in place, excavation, backfilling, and removal of surplus material, and shall include the furnishing and placing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 17—PUMP AND BLOWER HOUSE EQUIPMENT.

Description.

(A121) Under Item 17, the Contractor shall receive a lump sum which shall cover the furnishing of all material, labor, tools, and appurtenances required to complete the pump and blower house substructure, including suction and discharge piping, check valves, gate valves, gages and float tubes, float tubes for Venturi meter, bilge pumps and piping, except for such work as is covered by unit prices under Items 1 to 16, inclusive, and under Items 18 to 21, inclusive, all as specified, and except as otherwise specified herein. Under this item the Contractor shall furnish all the materials for and construct, complete, the work shown on the plans and specified in detail, under the following general heads:

Suction and discharge piping.
Check valves.
Gate valves.
Gages and float tubes.
Float tubes for Venturi meter.
Bilge pump and piping.

The substructure of the pump room, including the operating floor, is hereinafter referred to as the pumping station.

SUCTION AND DISCHARGE PIPING.

General.

(A122) The Contractor shall furnish and erect all cast-iron piping, specials, and fittings forming the suction and discharge pipes of the pumps, the flow control pipe, and connections and appurtenances. Included shall be the discharge pipe outside the building foundations up to and through the inlet into the grit chamber. Included also are the cast-iron pipe and specials required for the float tubes of the Venturi meter on the discharge main, the 6-inch floor drains of the blower room, coal pocket, and boiler room basement, the drain for the suction chamber, the 8-inch by-pass for the sluice gate, the wall castings and blank flanges for future pump suctions, the 12-inch pipe between the Venturi sewage meter vault and the basement, and wall castings and plug for the future discharge main in basement and meter vault.

Cast-Iron Pipe and Specials.

(A123) Except where otherwise noted on the plans or specified herein, the cast-iron piping and specials shall comply with the most recent edition of the standard specifications for cast-iron water pipe and special castings of the American Waterworks Association. All piping shall be Class A, except where receiving the spigot end of specials, when bells of the size furnished on the specials shall be provided. All specials shall be of the lightest class, which is standard, provided, however, that for special 14-

inch and over in diameter, the bells shall be made of the dimensions of Class C. All pipe and specials shall receive the hot treatment specified in said standard specifications.

All flange special castings shall meet the requirements of the American Waterworks specifications in as far as they apply. All flange special castings shall be made to and drilled to the American standard drilling. All flanges shall be cast solid and shall be faced accurately at right angles to the axis of the pipe. All holes for bolts or studs shall be drilled. Where tap bolts are specified holes shall be drilled and tapped.

The Contractor shall also furnish and place in the air duct and blower room basement two (2) cast-iron floor drains, of which one (1) shall have a 6-inch outlet to fit the 6-inch cast-iron pipe, and one (1) 4-inch to fit the 4-inch cast-iron pipe, the drains to be respectively No. 501 and No. 500, the Josam Mfg. Co. or equal. The Contractor shall also furnish and place in the coal pocket and boiler room basement two (2) accessible clean-out cast-iron floor drain basins, 14 inches in diameter by 17 inches deep, with exposed inner seal, with 6-inch outlet, as made by the Wade Iron Sanitary Mfg. Co. or equal. A 4-inch gate valve is to be set in the drain from the air duct, as shown on the plans.

Laying and Supports.

(A124) The piping, specials, fittings etc., shall be laid to line and securely supported and held in position and alignment, as shown on the plans or specified herein. Proper and suitable tools and appliances for the safe and convenient handling and laying of the pipes and special castings shall be used. Great care shall be taken to prevent the pipe coating from being damaged, particularly on the inside of the pipes and special castings. All pieces shall be carefully examined for defects and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound one in a satisfactory manner by the Contractor at his own expense. The pipes and special castings shall be thoroughly cleaned before they are laid, shall be kept clean until they are accepted in the completed work, and when laid shall conform accurately to the lines and grades given by the Engineer.

The Contractor shall furnish all the necessary pipe supports, saddles, hangers, and braces necessary to securely support the pipe and fittings in place and provide any necessary adjustment.

Lead Joints.

(A125) In jointing the pipes and special castings, the spigot of each piece shall be properly seated in the bell of the next adjacent piece and adjusted so as to give a uniform space for the joint, which will be made with twisted or braided hemp packing and soft pig lead. The packing shall be thoroughly driven into the bell so that the lead, after having been calked, shall have a depth of at least two (2) inches for pipes. The melting pot shall be kept near the joint to be poured and each joint shall be made at one pouring. Dross shall not be allowed to accumulate in the melting pot.

The joints shall be thoroughly calked by competent mechanics and in such a manner as shall secure a tight joint without overstraining the iron of the bells.

Testing.

(A126) The complete piping and connections shall be made tight when tested with water under a hydrostatic pressure of fifteen (15) pounds per square inch. The Contractor shall furnish, at his own expense, all apparatus, water and appliances necessary or proper for all tests, except the gages. All joints shall be examined and all visible leaks stopped. Where the piping is laid in excavation, the test shall be made before backfilling.

Flange Joints.

(A127) Flange joints shall be made with rubber gaskets, of the best quality cloth inserted rubber, of thickness and make, approved by the Engineer. When ordered by the Engineer joints shall be made with red lead, metal to metal.

All flange joints shall be firmly bolted with through, stud, or tap bolts of the required size as may be directed. The bolts and nuts shall be of the best quality of American refined bar iron, with good sound, well-fitting threads, the nuts to be cold punched. All heads and nuts shall be hexagonal. All heads, nuts and

threads shall be of the U. S. standard sizes. After each joint has been made, all bolt heads and nuts shall be coated with two (2) coats of asphaltum or other approved metal coating.

Wall castings, flanged on the suction chamber side, shall be furnished for the present and future pumps. The flanges shall be drilled and tapped for bronze stud bolts of the proper size, American standard drilling, and of sufficient length to bolt on a companion flange. The bolts shall be screwed home and provided with bronze nuts. The wall castings for the future pumps shall be equipped with companion flanges of cast iron, securely bolted in place, with rubber gaskets.

CHECK VALVES.

General.

(A128) The Contractor shall furnish and place in the pumping station, as shown on the plans, three (3) fourteen (14) inch check valves. The check valves shall be made preferably as shown on the detailed plans. However, the use of standard check valves may be permitted at the option of the Engineer, embodying the same features as the detailed designs, and providing the same area of water passage. A boss shall be furnished on the bottom of each check valve, with a 3½-inch hole through it. The boss shall be faced, drilled and tapped to join a standard 3½-inch flange. To this shall be bolted with bronze tap bolts and nuts a 3½-inch flanged gate valve. The check valves are designed to operate in sewage and drainage water containing trash. The workmanship and materials shall be the highest grade, conforming to the best standard practice.

The flap proper shall be made of cast steel, and in weight shall not be heavier than the calculated weight of the flap shown on the plans.

GATE VALVES.

General.

(A129) The Contractor shall furnish and place in the pumping station, gate valves of a make approved by the Engineer, of the size shown on the plans, together with all bolts, gaskets, supports, etc., to make a complete installation. These gate valves are designed to operate in sewage and drainage water containing trash and shall be of the highest grade in design, workmanship and material, conforming to the best standard practice.

The gate valves, 2 inches in size and larger, shall be made with iron bodies, bronze stems and full bronze mountings. The 14-inch gate valves shall be of the outside screw and yoke pattern, with solid wedge, geared.

The 8-inch gate on the by-pass shall be of the stationary spindle type with solid wedge. The 3½-inch, 4-inch, and 6-inch gate valves shall be of the outside screw and yoke pattern, with double disc. The valves shall have flanged ends, unless hub ends are shown on the plans or specified.

Each valve shall be constructed with a bolted bonnet, and provided with a stuffing box, constructed with a bolted follower. The stuffing box shall be provided with a bronze lined packing compressor. The stud bolts and nuts of each stuffing box shall be of bronze. The stuffing box shall be so arranged as to be readily accessible. All stuffing boxes shall be packed ready for use.

Both valve and seats shall be provided with bronze valve and seat rings which shall be carefully and firmly fitted and well hammered into dovetail grooves of uniform width and depth and shall be fastened to the cast-iron with counter-sunk head brass screws. The facing surfaces shall finally be machined all over to a perfectly true and smooth bearing, after which they shall be hand scraped to a water-tight joint.

The recess below the seat of the 14-inch gate valves shall be tapped for 1½-inch pipe. In each pipe tap shall be inserted a brass nipple, 1½-inch wrought iron pipe size, on which shall be screwed a 1½-inch brass gate valve of approved make.

The valves shall be of ample strength to withstand and operate satisfactorily under the working conditions specified. They shall be tested under thirty (30) pounds hydrostatic pressure in the shop, at the expense of the Contractor, and any valves which leak or show defects will be rejected. After the valves have been set they shall be tested for satisfactory operation.

Neat floor stands shall be provided for the 14-inch and 8-inch gate valves, equipped with wheels and indicators, where shown on the plans. Extension stems shall be provided, where

required, with guides, so far as practicable.

CONTROLLER.

General.

(A130) The Contractor shall furnish and place in the pumping station a controller unit designed to maintain a constant level in the suction chamber by bypassing a portion of the discharge. The unit comprises a special four-way valve, float and one (1) fourteen (14) inch hydraulically operated gate valve with appurtenances, as shown on the plans. All the apparatus furnished shall be of the highest grade in design, workmanship and material, conforming to the best standard practice. The Contractor shall erect all parts of the unit as far as practicable. Water connections will be furnished and made by the Sanitary District under another contract.

Hydraulic Valve.

(A131) The Contractor shall furnish and erect one (1) fourteen (14) inch hydraulically operated valve on the bypass. The gate valve shall be of the cast iron body pattern, with solid wedge, full bronze mounted, as specified in Section A129, so far as the same may apply.

The operating or lifting shaft of the hydraulically operated gate shall be of bronze. The upper end of the shaft shall be shouldered and threaded to connect with the piston which shall he held rigidly by a hexagon nut and lock nut.

The hydraulic cylinder shall be made of ample diameter to lift or close the gates when water is admitted at a pressure of twenty (20) pounds per square inch, but shall safely withstand and shall not jam the valve under a pressure of seventy-five (75) pounds per square inch. The water available for use will be taken from the mains of the Village of Maywood. The cylinder shall be tested at the maker's shop to a hydrostatic pressure of one hundred and fifty (150) pounds per square inch. The cylinder proper shall be of high-grade cast iron, flanged at both ends, and shall be machine bored through the entire length. It shall be lined with high-grade seamless-drawn brass tubing, which shall fit tightly inside the cast-iron housing, or it may be brass lined in any other manner approved by the Chief Engineer. The cylinder flanges shall be provided with male and female tenons, machined to a close fit, one with another. Suitable cast-iron supports shall be provided for attaching to the masonry. The lower head of the cylinder shall be provided with a stuffing box and bronze lined packing compressor. The stud bolts and nuts of each stuffing box shall be of bronze. Each head or cap shall be provided with tapped holes for wrought iron pipe. The piston shall be of cast-iron with the outer surface machined and equipped with approved means for adjustment of packing, so as to insure against leakage around the pistons.

The top head of the cylinder shall be provided with a stuffing box, similar to that on the lower head, through which a brass tail rod shall pass. The tail rod shall be furnished with an eye on the upper end.

All materials in the hydraulic valve and controller shall be of the best quality and suitable for the work required of them. The valve shall be tested as specified in Section A129, both in the shop and during operation.

GAGES AND FLOAT TUBES.

General.

(A132) The Contractor shall furnish and place all the water level gages, water level recorders, float tubes, floats, gage boards, fastenings and appurtenances, complete, as shown on the plans.

The Contractor shall furnish all the brass bolts, nuts, expansion bolts and wood screws, iron straps, and all other supports necessary to neatly secure and support the water level recording and indicating gages in place.

Water Level Recorders.

(A133) The Contractor shall furnish and set complete ready to use two (2) water level recorders of the type made by the F. B. Sanborn Co. of Boston, Mass., or equal, equipped to indicate water levels in the suction chamber and discharge pipe over the range specified. The charts are to be approximately twelve (12) inches in diameter, one for each 24 hours. The charts shall be printed with the ranges specified. A sufficient supply of charts, pens and ink shall be furnished to

equip each and every gage for one year.

Location	Range in Feet
Suction Chamber	30
Discharge	10

The materials are to be of the best quality for the purpose. The connecting cables are to be heavily armored. The cases are to be a neat glass front in a hinged iron frame, provided with a neat padlock. The cases are to be secured to the wall as directed by the Engineer, with anchor bolts with nickeled heads, screwed into lead sockets. The connecting cable and pressure tube are to be securely fastened in place as shown on the plans, by a brass pipe, w. i. pipe size, securely fastened to the flange at the top of the pipe.

Indicating Gages.

(A134) The Contractor shall furnish and set, complete, the indicating gage boards, gages, floats, float tubes and indicators, complete, as shown on the plans. The boards shall be made of selected clear oak stock, well seasoned, dressed all over. The wood shall be thoroughly primed and given three (3) coats of white paint composed of zinc white, white lead, and linseed oil, of the best quality, of make approved by the Engineer. The figures and lines shall be painted in black, in a size and manner to be approved by the Engineer. The floats shall be of No. 22 B. and S. gage copper, provided with brass strips, and secured to brass stems made to three quarters (¾) inch outside diameter No. 20 B. W. G. A brass indicator shall be furnished.

Gage and Float Tubes.

(A135) The Contractor shall also furnish and set the case-iron pipes for the water level recorders and for the float tubes, together with all specials, covers, plugs, footing pieces, and miscellaneous appurtenances, complete, erected in place, as shown on the plans. All cast iron pipe shall be Class A water pipe, American Water Works Association specification, latest edition. All specials shall be the lightest of the same specifications. The bells shall be provided, however, as specified in Section A123. All pipe shall be erected as specified in Sections A122 to A127, inclusive, so far as the same may apply. All flanges shall be faced and drilled. Hexagonal headed bolts and hexagon nuts shall be furnished. Gaskets shall be placed between all flanges of one-sixteenth (1/16) inch cloth insertion rubber. Split bronze bushings, threaded, shall be furnished where shown on the plans.

Float Tubes for Venturi Meter.

(A136) The Contractor shall also furnish and set the float tubes for the Venturi meters, complete, as shown on the plans. They shall be ten (10) inches internal diameter of Class A pipe, furnished and erected as specified in Section A135, so far as it may apply. Near the bottom, the tubes shall be drilled and tapped for a two (2) inch wrought iron pipe thread. All necessary supports, straps and anchor bolts shall be furnished.

The float tubes shall be connected up with two (2) wrought iron pipe and fittings to the Venturi meter as shown on the plans. Gate valves shall be furnished at the meter. Tees and plugs shall be furnished at angle points, as directed, for clear-outs. Unions shall also be used at intervals. All piping, fittings, valves and material shall be furnished and erected as specified in Sections A172 and A173, so far as the same may apply.

BILGE PUMP.

General.

(A137) The Contractor shall furnish and install, as indicated on the plans accompanying these specifications, one (1) bilge pump, as furnished by the Yeomans Brothers Co., grade one make, or equal, of the vertical, submerged, centrifugal type, with all floor plates and frames, discharge piping, motor, shafting, steady bearings, controls, alarms and all appurtenances necessary for its successful operation, without vibration, in continuous or intermittent service.

Pump.

(A138) The pump shall be of the vertical, submerged centrifugal type having a capacity of one hundred (100) gallons per minute against a total head of thirty-five (35) feet measured from the bottom of the sump. The pump and motor shall also be capable of operating against a head of ten (10) feet. It shall be of the open impeller type without diffusion or guide vanes. The pump

shall be supported by bosses resting on I-beams in the sump.

Motor.

(A139) The motor shall be of a standard manufacture, the General Electric Co. or Westinghouse Co. make or equal, as approved by the Engineer. It shall be of the vertical, squirrel cage type, slow speed. The motor shall be of ample size to care for the operating conditions under all conditions of head ranging from ten (10) to thirty-five (35) feet, to operate on alternating current of three (3) phase, sixty (60) cycle, four hundred and forty (440) volts. It shall be equipped with an approved thrust bearing and with protecting hood over the head.

Shafting and Bearings.

(A140) All necessary vertical shafting with guide bearings and couplings shall be provided to connect the motor and pump so that the pump and motor may operate continuously, with or without load, without vibration and noise. A flexible coupling of approved design shall be provided to connect the vertical extension shaft from the pump to its motor shaft. The vertical shafting and impeller of the pump shall be supported by a self-aligning, force feed, thrust bearing of an approved make, located at the motor floor level. A substantial arrangement for securing thrust collars of thrust bearings to vertical shafting shall be provided. The pump shaft where it passes through the pump casing shall be fitted with a bronze sleeve. A stuffing box and gland, packed, ready for use, shall be provided. The steady bearing on the pump case shall operate in an oil bath. Intermediate steady bearings shall be provided. All necessary oil piping and oil cups shall be provided for all bearings.

Floor Plate and Bracing.

(A141) The Contractor shall provide and place a neat cast-iron floor plate at the motor floor level, to which shall be bolted the feet of the motor and the thrust bearing. The Contractor shall also provide and erect the necessary angle or channel iron bracing to carry the steady bearings, and the I-beams to carry the pump. All angles, channels and I-beams shall be securely bolted to the wall with anchor bolts, and not set in.

Discharge Piping.

(A142) The Contractor shall furnish and install all suction and discharge piping from the bilge pump. There shall be furnished and installed in the discharge pipe from the pump one (1) four (4) inch gate valve and one (1) four (4) inch horizontal swing check valve of the Crane Co. make or equal, iron body with bronze facings.

Controlling and Alarm Equipment.

(A143) With the bilge pumping equipment there shall be furnished and installed an automatic control of the motor, which shall be mounted on an angle iron frame above the motor, on flanged pipe supports.

The automatic control shall consist of one (1) two-pole, butt-carbon-contact, quick-break automatic float switch, fully enclosed in cast iron casing; one (1) enclosed three-pole knife switch with fuses and time limit overload phase protective device.

The float shall be operated by a reinforced copper float running in a pipe casing suspended by brackets from the wall of the building or sump, the float being connected to the float switch by means of a suitable brass rod, with aluminum spreaders and adjustable stops.

There shall be installed with the bilge pump a high water alarm system, with enclosed contacts, a six (6) inch diameter 110 volt A. C. bell, with necessary relay.

Wiring.

(A144) The installation of all wiring to connect controlling apparatus, switches, and other operating devices with station wiring, will be furnished under another contract.

The alarm system shall be operated by a copper float, separate from the float switch control of the motor.

Painting.

(A145) All iron or corrosive material shall be properly primed and given two (2) coats of an approved paint before leaving the shop.

After erection the equipment shall be thoroughly cleaned and given a coat of machinery paint of color as directed by the Engineer, and a coat of varnish. All polished metal work shall be given a coat of lacquer.

Payment.

(A146) The lump sum specified to be paid under Item 17 for the pump and blower house equipment shall include the furnishing and placing of the suction and discharge piping, check valves, gate valves, gages and float tubes, float tubes for Venturi meter, bilge pump and piping, and appurtenances, complete, in place, as specified, and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 18—TANK EQUIPMENT.

Description.

(A147) Under Item 18, the Contractor shall receive a lump sum which shall cover the furnishing of all material, labor, tools, and appurtenances required to complete the activated sludge tanks, including aeration tanks, settling tanks, sludge tanks and return channels, and miscellaneous work in the grit chamber, together with other miscellaneous work, complete, except for such work as is covered by the unit prices under Items 1 to 16, inclusive, and under Items 17 and 19 to 22, inclusive, all as specified, and except as otherwise specified herein. Under this item, the Contractor shall furnish all the materials for and construct, complete, the work shown on the plans and specified in detail, under the following general heads:

Ridge blocks.
Filtros plate containers.
Filtros plates.
Sludge tank blocks.
Sludge-removing pipes.
Winches and cable.
Baffles and deflectors.
Inlet weirs.
Slide gates.
Effluent troughs.
Sludge troughs.
Sludge measuring boxes.
Grit chamber equipment.

No payment will be made at the unit prices specified for concrete under items 5, 6, and 7 for any concrete used and placed in the ridge blocks, filtros plate containers and sludge tank blocks furnished under items 18. The cost of these shall be included in the lump sum to be paid under item 18.

For the effluent troughs and sludge measuring boxes, a standard tank construction detail may be submitted by the Contractor for approval, built up of dressed stock, through bolted in sides and bottom, and suitably stiffened, as manufactured by a recognized wooden tank manufacturer, all subject to the approval of the Engineer.

All the effluent troughs, sludge troughs, and sludge measuring boxes shall be made carefully with tight joints, to hold water. All leaks shall be fixed. The work shall be made watertight by the Contractor without the use of paint. The boxes and troughs, when erected, shall be kept full of water. The Contractor shall supply all wooden plugs or other material required for this purpose.

Ridge Blocks.

(A148) Inside the aeration tanks and elsewhere are required ridge blocks, to make the ridge and valley construction shown on the plans. The ridge blocks and filler blocks, wherever shown, shall be composed of Class B concrete, as specified in Sections A37 to A64, inclusive, so far as the same may apply. This concrete shall be moulded in forms, rigidly framed to prevent springing or warping. The blocks shall preferably be cast separately and afterwards placed in position. They may, however, with the approval of the Engineer, be constructed directly in place on the floor of the aeration tanks. Especial care shall be taken to keep in true alignment the edges which abut against the filtros plate containers. All surfaces shall be smooth and free from voids. Slight imperfections shall be plastered before the filtros plate containers are set. All blocks shall be inspected by the Engineer before the filtros plate containers are set, and all imperfect blocks shall be removed and promply replaced with acceptable ones, at the expense of the Contractor. If the ridge blocks are not cast in place, they shall be set in a thin bed of cement mortar composed of one (1) volume of cement and three (3) volumes of plastering sand. All chinks or crevices between the ends of the abutting blocks or between blocks and the walls of the tank shall be neatly filled with fine moist sand to within one-half (½) inch of the surface of the block, and then pointed flush with the cement mortar above specified. After all the pointing and

plastering has been completed, the channels or spaces between the blocks in which the containers are to be set, shall be thoroughly and carefully cleaned of all mortar, mortar droppings, or other debris.

Where drains, holes, grooves or other openings are shown on the plans, they shall be made neatly in the blocks, by suitable molds at the time the blocks are cast.

Where shown on the plans, the blocks shall be secured in place by dowels, grouted in. The dowels shall be of reinforcing steel, set in holes drilled in the bottom of the tank after the concrete is set, and grounted in. Companion holes shall be drilled or left in the blocks to be anchored.

Filtros Plate Containers.

(A149) Between the ridge blocks in the bottom of the aeration tanks, and in various channels appurtenant thereto, wherever shown, are required filtros plate containers, to hold the filtros plates through which the air is blown in fine bubbles. These containers shall be made above ground and shall be cast in watertight forms, preferably of cast-iron, accurate in size, true in shape, and rigidly framed to prevent any spring or warping or other distortion, while the concrete is being placed. The forms shall not be removed from the container before the concrete has attained its final set. The concrete shall be Class A concrete, made up with ballast, well graded, all of which shall pass through a one (1) inch ring. It shall be placed in the forms as quickly as possible after being mixed. The filling of forms shall be continuous, and if for any reason the work is stopped long enough for the cement or concrete to take its initial set, such partly filled forms shall be emptied. The concrete shall be thoroughly tamped into place and thoroughly spaded or troweled on the inside face to make a rich mortar and smooth finish. A dense watertight and airtight concrete is required. As soon as the forms are removed, the containers shall be protected from the sun, wind and weather for at least six (6) days. All containers shall be marked with the date of manufacture, and none shall be used until at least thirty (30) days old.

Reinforcing steel shall be of the quality and kind specified in Sections A65 to A69, inclusive, so far as the same may apply. The sizes shown shall be placed as shown on the plans. All reinforcing steel used in containers which are accepted, will be paid for at the unit price specified under Item 8. No payment will be allowed for reinforcing steel in containers which are rejected. The Contractor shall also furnish and place the wrought iron pipe fittings and wrought iron ring bolt, as shown on the plan. These shall be made for the purpose from a working plan to be furnished by the Sanitary District. No payment will be made for these fittings at the unit prices specified to be paid for reinforcing steel, miscellaneous steel, or cast iron under Items 8, 9 and 10.

Especial care shall be taken to secure sound airtight and watertight containers, true to dimensions of clean smooth concrete, free from flaws or defects. Unusual care must be taken to keep and make in true alignment the faces upon which the filtros plates seat and the seats into which the T-bars seat, so that all faces line up true to make a complete bearing all around for the filtros plate. If necessary, in the opinion of the Engineer, the seats shall be chipped or ground true, by the Contractor at his expense. All containers will be inspected by the Engineer before the filtros plates are set, and all imperfect containers shall be removed and destroyed by the Contractor at his expense.

Filtros Plates.

(A159) The Contractor shall furnish and set in the filtros plate boxes a specially prepared porous plate, known as Filtros, made by the General Filtration Co. of Rochester, N. Y., or equal. The filtros plate shall be composed essentially of silica, bonded by a silicate. The plates furnished shall be of the standard size twelve (12) by twelve (12) inches square, one and one-half (1½) inches thick, of the grade between those known as "R" and "S," which plate when dry shall pass at two (2) inch water pressure between ten (10) and twelve (12) cubic feet of air per square foot per minute. The Chief Engineer may, however, modify this rating in a written order, if he desires, to twelve (12) to fifteen (15) cubic feet of air per square foot per minute, or in this general range. The ratings shall be as nearly uniform as possible for the plates to be set in each tank. Each

plate shall be tested and marked with its rating. The ratings shall be reported to the Engineer. The rating, number of plates at each rating for each tank and other details shall be adjusted and arranged by the Chief Engineer and the Contractor, at such time as the order for the plates is placed by the Contractor subject to the approval of the Chief Engineer.

The plates shall be carefully inspected on the site of the work. All broken or imperfect plates shall be rejected. The plates shall be sorted by ratings, to conform to the schedule agreed upon by the Chief Engineer and placed in the boxes to conform to the schedule. The plates shall bear evenly on all four sides. The Contractor shall furnish the T-bars shown on the plans. These shall be cut to length from stock, thoroughly cleaned, and heavily galvanized, before delivery on the work. Before the plates are set in a container, the container, plates, pipe connection and T-bars shall be thoroughly cleaned. The plates shall be centered and seated, and the vertical joints around the plate between the plate and the concrete box shall be carefully filled with cement mortar, thoroughly troweled into place and pointed. The plates shall be kept clean and free from all cement on the surface. The mortar shall be composed of one (1) part of Portland cement and two (2) parts of fine sand.

Sludge Tank Blocks.

(A160) Inside the sludge tanks are required ridge blocks, to make the ridge and valley construction shown on the plans. The blocks shall be made and placed as specified in Section A148, so far as the same may apply. Reinforcing steel ordered placed in the blocks will be paid for at the unit price specified under Item 8.

Sludge-Removing Pipes.

(A161) The sludge tanks shall be equipped with the sludge-removing pipes, elbows and nipples, shown on the plans. The sludge-removing pipe or collector shall be a spiral riveted pipe, 8 inches interior diameter, of galvanized sheet steel, No. 14 gage, Birmingham gage, fitted with forged steel flanges, faced and drilled, American standard drilling. A neat pipe strap, one-eighth (⅛) inch thick, bolted on, shall be furnished to which the bronze cord is to be attached. The cast iron elbows and wrought iron pipe nipples shall be furnished as specified in Sections 171 to 173, inclusive, so far as they may apply, and shall be placed, as shown on the plans, with a loose thread, so as to allow an upward and downward movement of the sludge removing pipe by the cable. All threads shall be coated with a paste of graphite and heavy engine oil before assembling. After erection the elbows, nipples, pipe straps, and flanges as well as all bolts, boltheads and nuts shall be given two (2) coats of asphaltum varnish or other approved paint.

Winches and Cable.

(A162) The Contractor shall furnish and set in place six (6) hand power winches of the safety worm-geared type, made of the best malleable iron, with a drum approximately five and one-half inches in diameter, six (6) inches long, with drum flanges about two and three-quarters (2¾) inches high, of the pattern made by the Sasgen Derrick Co. or equal. Each winch shall be provided with a crank and handle, and shall be bolted to the concrete with steel anchor bolts. Suitable oiling holes shall be provided at the bearings.

The Contractor shall also furnish and place on each winch drum, connected to the lifting drain pipe, a twenty-five (25) foot length of flexible phosphor bronze tiller rope one-quarter (¼) inch diameter, with an estimated ultimate strength of 1,500 pounds. The ends of the rope attached to the lifting pipe shall be carried around a brass thimble and securely spliced or held by clips. The upper end of the rope shall be fastened to the drum in an approved manner. The winches and anchor bolts shall be given two (2) coats of asphaltum varnish or other approved paint after erection.

Baffles and Deflectors.

(A163) At all the inlets to the settling tanks shall be placed inlet baffles, made of galvanized genuine wrought iron plate, the Merchants IX, Toncan or equal brand, of thickness equal to No. 12, B.W.G. These baffles shall be stiffened at the corners and wall by angle irons as shown. Each baffle shall be secured to the wall by anchor bolts, leaded in. Before erection in place, the baffle shall be given

two (2) coats of asphaltum paint of approved make. At each inlet shall also be placed a deflector of the same weight and material above specified bolted to the wall. Immediately after erection all bolts and nuts shall be given two (2) coats of asphaltum varnish or other approved paint.

Inlet Weirs and Slide Gates.

(A164) The Contractor shall furnish and set the inlet weirs and slide gates as shown on the drawings, with all necessary materials and appurtenances, complete. All iron work shall be galvanized after cutting and making up.

The inlet weirs shall be made of steel plate, one-quarter (¼) inch thick, with a V-notch cut as shown and filed true. If necessary the edges shall be ground or filed after galvanizing. The bolt holes shall be slotted. Bronze stud bolts and nuts shall be furnished, and cast-iron washers or spacers.

The slide gates shall be made of steel plate, one-quarter (¼) inch thick, to which shall be riveted a neat steel handle made from stock one-half (½) inch diameter.

The weirs shall be set exactly true to the line and grade given by the Engineer. The plates shall be bedded in a thin bed of mortar, composed of one (1) part Portland cement and three (3) parts plastering sand.

Effluent Troughs.

(A165) The Contractor shall furnish and place the effluent troughs, posts, baffles and appurtenances in the settling and aeration tanks as shown on the plans. The troughs shall be made of well seasoned selected No. 1 yellow pine, 2-inch stock, free from loose knots, dressed all over, and doweled together, bolted, strapped and fastened with lag screws, as shown on the plans. Suitable fillets shall be placed in the corners. All necessary bolts, washers, wood screws, lag screws and other fastenings shall be furnished.

The weirs shall be made of genuine wrought iron plate, galvanized, one-eighth (⅛) inch thick, cut with a true-edge, which shall be filed or ground level after erection in place. The weirs shall be firmly secured to the troughs by screws.

The iron baffles shall be made of genuine wrought iron plate, galvanized, of thickness equal to No. 10 B.W.G. The baffles shall be screwed to the troughs and braced with strap iron braces, bolted and screwed in place.

Angle braces shall be securely fastened by lag screws to the troughs and posts. The posts shall be made of No. 1 yellow pine, dressed all over, securely guyed in place by one-half (½) inch galvanized steel wire rope, secured to galvanized eye bolts set in the wall. Each guy rope shall be provided with a galvanized turnbuckle. When adjusted the threads shall be heavily painted with a mixture of white lead and tallow. The wire rope shall be bent around suitable galvanized steel thimbles and secured by approved wire rope clips.

The wooden baffles shown on the plans, separating the sewage aeration from the sludge aeration compartment shall be of No. 1 yellow pine, dressed all over, as shown on the plans.

Sludge Troughs.

(A166) The Contractor shall furnish and support the sludge troughs and appurtenances in the aeration and settling tanks, complete, as shown on the plans. The construction shall be as specified under Section A165, so far as it may apply.

Sludge Measuring Boxes.

(A167) The Contractor shall furnish and set the sludge measuring boxes, required, made in accordance with the detail plan. The boxes shall be made of selected No. 1 yellow pine, free from loose knots, dressed all over and dowelled and bolted together. The boxes shall be bolted to the pipe flanges shown, a rubber gasket, painted on both sides with white lead, being set between. The weirs shall be made of steel plate cut to shape and filed true on the measuring edge, then galvanized. The measuring edges shall be refiled or ground if needed to smooth up. The weirs shall be fastened to the boxes with brass screws, using a rubber gasket painted on both sides with white lead. The necessary concrete, Class B, shall be placed in the boxes, and hand trowelled with an iron trowel to a smooth finish. The Contractor shall furnish the necessary pipe supports, with flanged ends and angle irons, neatly painted with two (2) coats of asphaltum varnish.

Each box shall be equipped with a float measuring gage, made up of sheet

copper, No. 14 B.W.G., neatly seamed and soldered, with the stem of seamless drawn brass pipe, w. i. pipe size, running through the float, and fastened top and bottom. Each float shall have a screwed inlet plug. The gage board shall be of oak, painted as specified in Section A134, and graduated as shown.

Grit Chamber Equipment.

(A168) The Contractor shall furnish and place in the bottom of each compartment of the grit chamber the 8-inch split tile and graded crushed stone and gravel as shown on the plans and specified herein. The 8-inch split tile shall be hard burned tile, with bells, of the quality specified in Sections A102 and A103. They shall be lightly bedded in the bottom of the grit chamber while the concrete is still soft. The joint between the barrel of the pipe and socket shall be kept full width, and the entering pipe shall make an open joint of one (1) inch between the end of the pipe and the bottom of the socket. After the concrete has set and the forms have been removed, a bed of clean graded material shall be built up, layer by layer, composed of a bottom layer six (6) inches thick of crushed limestone, passing a ring 1¼-inch diameter and retained on a ring ¾-inch diameter, a middle layer three (3) inches thick of crushed limestone passing a ring ¾-inch diameter and retained on a ring ¼-inch diameter, and a third and top layer composed of three (3) inches of fine roofing gravel practically all passing a ring ⅜-inch diameter and retained on a sieve having ten (10) meshes per lineal inch. All material shall be as specified in Section A41, so far as the same may apply. The 6-inch tile pipe shall be furnished as shown and of the quality specified in Sections A102 and A103.

Payment.

(A169) The lump sum specified to be paid under Item 18 for the tank equipment shall include the furnishing and placing of the ridge blocks, filtros plate containers, filtros plates, sludge tank blocks, sludge removing pipes, winches and cable, baffles and deflectors, inlet weirs, slide gates, effluent troughs, sludge troughs and grit chamber equipment, with appurtenances, complete, in place, as specified, and shall include the furnishing and placing of all labor, tools, material and appurtenances necessary to complete the work as specified.

ITEM 19—AIR PIPING.

Description.

(A170) Under Item 19, the Contractor shall receive a lump sum which shall cover the furnishing of all material, labor, tools and appurtenances required to furnish and erect in place all the air piping required to connect up the blowers with the air inlet duct and with all the filtros plate containers, air lifts, sludge pipes, aeration pipes in sludge tanks, air relief line, cross connection between the supply lines, and all other points where air piping is indicated. Included under this item shall be the placing and connecting of the Venturi air meters, the connecting up of the Venturi air meters with the recording and indicating apparatus, the placing and connecting up of the separators in the blower room basement, and all other work and material required to complete the air piping as shown on the plans and specified herein.

Included under this item shall be all piping required of riveted spiral sheet steel, cast iron, and wrought iron carrying air, with all necessary bends, specials, flanges, check valves, safety valve, gate valves, traps and other appurtenances. It is the intent of the specifications under this item to provide for the furnishing and placing of all piping, valves, supports and appurtenances required to complete the air piping in all parts of the work.

Riveted Spiral Pipe and Specials.

(A171) All riveted spiral pipe shall be of the American Spiral Pipe Works make or equal, galvanized both inside and out, of sheet steel. All 8, 10 and 12-inch diameter pipe shall be of No. 14 gage, B.W.G. All 16-inch and 24-inch pipe shall be of No. 12 gage, B.W.G. All flanges shall be of forged steel, securely riveted to the steel pipe. All bends, Ys and other changes of direction shall be made with spiral riveted pipe, but where necessary, flanged cast iron fittings shall be used. These shall be of standard patterns made by the American Spiral Pipe Works or equal, of weight and dimensions to be approved by the Engineer, and shall be galvanized. The Contractor shall submit a layout plan for the approval of the Engineer. In any case sufficient flanged joints

shall be made to facilitate ready erection or repair of the pipe. The use of standard reinforced spiral pipe, as made by the Standard Spiral Pipe Works or equal, will be permitted, of the same gages of sheet metal, as above specified. The spiral joints shall be made with a continuous interlocking seam. Flanges may be riveted or welded to the spiral pipe. The details of construction shall be submitted to the Engineer for approval.

All galvanizing shall be done by the hot process, after all forming has been done, joints riveted, welded or interlocked, and the flanges attached.

All flanges shall be faced and drilled. In general, the standard forged steel flanges of the American Spiral Pipe Works make or equal may be used, of the proper spiral pipe diameter and drilling, provided, however, that to connect to all gate valves, check valves, separators, Venturi meters, suction and discharge flanges of the blowers and other points where flanges of the American Society of Mechanical Engineers standard diameter and drilling have to be joined, the flanges furnished on the air piping or specials shall be of forged steel, of the A. S. M. E. standard diameter and drilling, herein referred to as the American standard.

An expansion joint of approved character, air tight, shall be placed in the 24-inch air line in the blower room basement, and also in the pipe gallery at a point to be approved by the Engineer.

At each meter, the Contractor shall drill the main air pipe and put a saddle on the riveted steel pipe, which shall be drilled and tapped for a 1-inch wrought iron pipe. A galvanized plug shall be furnished for each tap, together with a bushing and a ⅜-inch galvanized pipe nipple and cap screwed together so that the cap on the end of the nipple will not project beyond the center of the main air pipe, when the bushing is screwed home.

Cast-Iron Pipe and Specials.

(A172) All cast-iron pipe and specials shall be furnished and placed as specified in Sections A123 to A127, inclusive, so far as they may apply. All cast-iron pipe shall be Class A, bell and spigot, except for the connections to the Venturi meters, which shall be flanged. All specials shall be of the lightest class, for the respective sizes, given in the American Water Works standard specifications. All flanges shall be faced and drilled, American standard drilling.

The cast-iron header pipes in the aeration tanks shall be drilled and tapped for the 1½-inch wrought iron pipe connections to the filtros plate containers. At the end of the 24-inch air pipe, the 24-inch and 16-inch pipes shall be drilled and tapped for 2-inch wrought iron pipe connections, to drain the 24-inch pipe.

Certain cast-iron header pipes and specials in the aeration tanks shall be supplied galvanized, instead of the standard black coating. All such galvanizing of cast-iron pipe, when and as ordered by the Engineer, will be paid for at the unit price per pound specified for galvanizing under Item 25.

Wrought Iron Pipe and Fittings.

(A173) All wrought iron piping shall be of standard weight, Byers genuine wrought iron or equal, galvanized. All pipe shall be stood on end and pounded before erection, to remove all scale. Threads shall be clean cut and long taper.

In one aeration tank, as noted on the plans, galvanized steel nipples shall be used in connecting up to the filtros containers. These nipples shall be kept entirely separate from all genuine wrought iron nipples.

All fittings shall be galvanized. Fittings for pipe two (2) inches in size or larger shall be of fine grain gray cast iron. Fittings for pipe one and one-half (1½) inches in size or smaller shall be of malleable iron. All threads shall be cut clean, tapering and smooth. Flanged unions shall be used on all pipe 2½-inch diameter and over. Railroad unions with brass to iron seat shall be used on all piping 2-inch diameter and smaller. Pipe bends shall be made neatly to keep the full diameter of the pipe, where shown in the plans or ordered by the Engineer.

The piping shall be made up with a sufficient number of unions to permit ready breaking of lines at all points for inspection or maintenance. All piping shall be screwed together with an application of graphite and engine oil or other approved pipe compound on all threads. This application shall be carefully watched and all oil, gra-

phite, and dirt thoroughly wiped off the inside of every joint.

In the sludge concentration tanks, the air distribution piping shall be furnished with the 2-inch galvanized wrought iron piping drilled with ⅛-inch diameter holes, spaced 4 inches center to center and staggered, as shown on the plans. All burrs inside and outside the pipe shall be removed.

Water Traps.

(A174) At the low point on the main air lines the Contractor shall furnish and install on the 24-inch air line one (1) ¾-inch trap, and on the 10-inch air line one (1) ½-inch trap, both traps being of the Cranetilt type, Crane Co. Catalog, p. 273, or equal.

Check Valves and Relief Valve.

(A175) The Contractor shall furnish and place check valves of the sizes shown on the plans. In the discharge line from each blower and in the main headers to each aeration tank, as shown on the plans and specified herein, the check valves shall be standard swing check valves, iron body, with brass seats, with flanged ends, of the Crane Co. make, or equal. The flanges shall be faced and drilled, the American standard drilling. On the piping to the water traps and on the air lines to the feed troughs to settling tanks the check valves shall be standard brass check valves, with screw ends, of the Crane Co. make or equal.

A 6-inch flanged pressure relief valve of the spring loaded type, Crane Co. No. 386-A or equal, is to be furnished and set in the 6-inch relief line from the 24-inch main air line. This valve is to be adjustable to pressures up to 12 pounds per square inch gage. The flanges shall be faced and drilled.

Gate Valves.

(A176) All gate valves shall be of the double disc type, Chapman Valve Mfg. Co. or Crane Co. make or equal, suitable for light pressures, unless otherwise specified. All valves shall be of the outside screw and yoke pattern, iron body, full brass mounted for all pipe two (2) inches in diameter or larger. All valves shall be of the rising stem pattern, all brass, except the hand wheels, for all pipe one and one-half (1½) inches in diameter or smaller. All valves shall be left, packed, ready for use. Cotton yarn packing, dipped in cylinder oil, or other approved packing shall be used.

Extension stems shall be furnished where shown on the plans, with all necessary guides or supports bronze bushed. A neat floor stand shall be furnished and placed on the main operating floor, for the 10-inch blow off valve on the main air line in the blower room basement. In the sludge concentration tanks the 3-inch gate valves shall have non-rising stems, with extension stems, and guides as shown on the plans.

A ten (10) inch motor driven flanged gate valve, with solid plug gate suitable for throttling, is to be provided on the by-pass between the high pressure and low pressure air lines. The motor is to operate on 440 volts 3 phase 60 cycle alternating current and is to be controlled from a point approximately three hundred (300) feet away. Suitable controlling devices are to be provided to permit the valve to be stopped and set at any opening between full open and closed positions, and a set of indicator lamps to show whether the valve is open, closed or partly open is to be included. A limit switch for automatically stopping the motor when the valve is fully opened or closed shall also be provided as well as supplementary handwheel operation with suitable devices for disengaging the motor when hand operation is desired. The valve shall be of the general type specified in Section A129, and shall be furnished with drilled flanges. The valve and controlling devices shall be put in careful adjustment before acceptance. The wiring and erection of the controlling device will be done under another contract. 110 volt current will be available, however, for all solenoid control.

Gaskets, Bolts, Etc.

(A177) The Contractor shall supply and place all gaskets, bolts, nuts stud bolts, etc., necessary to erect the work and make it air tight. The gaskets shall be of rubber with cloth insertion, of a thickness and quality approved by the Engineer. The bolts and nuts shall be furnished and painted as specified in Section A127.

Supports.

(A178) The Contractor shall furnish at his expense all supports necessary to support the air piping and appurtenances in a firm substantial manner to the lines and grades given by the Engineer. The concrete saddles, how-

ever, shown on the plans, will be paid for at the unit price specified under Item 6. The Contractor shall supply all stirrups, rods, beam clamps, hangers, structural shapes or pipe columns, whether shown on the plans or not, necessary to complete the work in a manner satisfactory to the Engineer.

Pipe Sleeves.

(A179) Wherever air pipe lines pass through the walls or floors in general, there shall be provided pipe sleeves made of cast-iron with wall or floor plates, painted black. On all wrought iron pipe lines, the Contractor shall furnish these at his own expense. On cast-iron or riveted steep pipe lines, wall or floor casting will be paid for at the appropriate unit price specified under Items 9 or 10, according to the material used. Where air lines pass through the walls of the pipe gallery or tanks, holding water or sewage, the pipe lines or appropriate wall castings forming a part of the pipe line shall be bedded in the concrete, and no sleeve will be required. No additional payment will be made for such piping at any unit prices.

The Contractor shall furnish, at his own expense, a man to set the sleeves while the walls and floors, are being poured. All cutting, patching and repairing of walls, floors, partitions, etc., necessary for the proper installation of the air piping shall be included under this item.

Erecting Equipment Furnished by Sanitary District.

(A180) Under Item 21, the Contractor is to unload and erect certain equipment furnished by the Sanitary District as therein specified, including blowers, separators, Venturi meters and recording apparatus for measuring air, etc. Under Item 19, the Contractor shall connect the air lines with all such apparatus, in a complete manner, so that the blowers, separators, Venturi meters and recording apparatus, etc., will be connected up, ready for use. The drain and drain connections to carry away the water from the separators are not included under this contract. The recording and indicating apparatus for the air meters shall be connected to the respective connections on the meters. Gate valves shall be furnished at the meters on all pipe lines connecting to the recording or indicating apparatus.

Cleaning and Testing Air Piping.

(A181) It is of unusual importance that all air piping be absolutely clean inside when the work is completed. During erection, the Contractor shall use every care to clean out all pipe before placing, and to keep it clean after erection. By clean is meant free from every kind of foreign material, of whatever origin. Proper wooden bulkheads shall be provided to stop off each day's work. Before connecting up to the filtros plates, the entire system shall be blown out thoroughly for at least eight (8) hours. The current and operation of the blowers will be supplied by the Sanitary District, if the apparatus is set up and ready to operate. If the blowers are not ready to operate, the Contractor shall postpone the final connection of the filtros plate boxes until such time as the lines can be blown out.

The Contractor shall make the air lines tight under a test pressure of air at ten (10) pounds per square inch. This pressure shall not drop more than one-half (½) pound in one (1) hour with all valves and connections shut. All leaks shall be stopped. The lines to be bedded in concrete or laid in excavation shall be tested before the concrete or backfill is placed. The Contractor shall furnish the necessary bulkheads and make the necessary taps, and supply all connections for the gauges, which the Sanitary District will furnish. The Contractor shall also furnish for testing purposes all the air required, at his own expense.

Painting.

(A182) After the work is erected and tested all black iron pipe work, specials, pipe supports and hangers of all kinds, bolts, bolt heads and nuts shall be given two (2) coats of asphaltum varnish or other approved paint. These two coats, however, shall not be in addition to the two coats specified in any particular section of this item, but shall be taken to include all work not otherwise covered in this item. No painting is required on dipped cast-iron pipe or special, except to retouch the coating where damaged.

Payment.

(A183) The lump sum specified to be paid under Item 19 for the air

piping shall include the furnishing and placing of all air piping, including spiral riveted steel pipe, wrought iron pipe, cast iron pipe, specials, flanges, check valves, safety valve, gate valves, traps and other appurtenances, complete, in place, as specified, and shall include the furnishing and placing of all labor, tools, materials and appurtenances, necessary to complete the work as specified.

ITEM 20—SUPPLY, EFFLUENT, SLUDGE AND DRAIN PIPING.

Description.

(A184) Under Item 20, the Contractor shall receive a lump sum which shall cover the furnishing of all material, labor, tools and appurtenances required to furnish and erect in place the supply, effluent, sludge, and drain piping, with miscellaneous piping and appurtenances, within the pipe gallery, aeration tanks, settling tanks, and sludge tanks, as shown on the plans and specified herein. It is the intent of the specifications under this item to provide for the furnishing and placing of all piping, valves, supports and appurtenances required to complete the pipe work in the pipe gallery, aeration tanks, settling tanks and sludge tanks, exclusive of the tank equipment and air piping specified to be paid for under Items 18 and 19 respectively, and exclusive of all piping specified to be paid for at the unit prices under the respective items, provided, however, that no payment shall be made for any work at said unit prices for Items 9 to 16 inclusive, unless specifically mentioned in said Items 9 to 16 inclusive, for payment.

Supply Piping.

(A185) The supply piping shall comprise all piping, specials, fittings, gate valves, and appurtenances required to furnish and erect in place the piping furnishing raw sewage to the aeration tanks, beginning with the junction of the cast-iron pipe with the tile supply pipe, just north of the operating gallery, and extending through the operating gallery to each aeration tank, as indicated on the plans. The Venturi meters shall be connected up in the pipe lines. The meters shall be connected to the float tubes with galvanized wrought iron pipe, with a gate valve on each pipe connecting to a float tube, set near the meter tube. Under this heading shall also be furnished the extension of the water supply piping in the pipe gallery, aeration tanks, settling tanks, and sludge tanks, as shown on the plans.

Effluent Piping.

(A186) The effluent piping shall comprise all piping, specials, fittings, gate valves and appurtenances required to furnish and erect in place the piping carrying the effluent of the aeration tanks to the settling tanks and carrying the effluent of the settling tanks to the 42-inch concrete main outlet.

Sludge Piping.

(A187) The sludge piping shall comprise all piping, specials, fittings, gate valves and appurtenances required to furnish and erect in place the piping carrying the sludge from the bottom of the settling tanks to the measuring boxes and return channels, and all other piping in which sludge is carried, except such apparatus as is covered under Item 18.

Drain Piping.

(A188) The drain piping shall comprise all piping, specials, fittings, gate valves and appurtenances required to furnish and erect in place the piping which drains the aeration and settling tanks, through the pipe gallery to its junction with the 18-inch cast iron main drain at the north end of the operating gallery, and the piping draining the sludge tank to its junction with the 12-inch cast iron main drain at the north end of the tanks.

Wrought Iron Piping.

(A189) All wrought-iron piping shall be of standard weight Byers genuine wrought iron or equal. All piping and fittings 1½ inch diameter and smaller in size shall be galvanized. All piping and fittings 2 inch diameter and larger shall be given a hot pipe dip as specified in Section A123. All pipe and fittings shall be furnished and made up as specified in Section A173, so far as the same may apply.

Cast-Iron Piping and Specials.

(A190) All cast iron pipe and specials, whether bell and spigot or flanged, shall be furnished and placed as specified in Sections A123 to A127, inclusive, so far as the same may apply. For connecting all flanged

sluice gates or gate valves in tanks, where the sluice gates or gate valves will be under water, bronze bolts and nuts shal be furnished instead of iron. Blank flanges, drilled and faced, shall be provided where shown on the plans, with bronze bolts and nuts, or stud bolts. Cast iron float tubes shall be drilled and tapped for the wrought iron pipes connecting to the Venturi meter tubes. Condensed fittings shall be furnished where shown on the plans.

Gate Valves.

(A191) All gate valves shall be of the double disc type unless otherwise specified, the Chapman Valve Mfg. Co. or Crane Co. make or equal, suitable for light pressures. On all pipe two (2) inches in diameter or larger, all valves shall be iron body, full brass mounted, with screw, flanged or hub ends as shown on the plans or required. On all pipe one and one-half (1½) inches in diameter or smaller, all valves shall be of the rising stem pattern, all brass, except the hand wheels. All valves shall be left, packed, ready for use. Cotton yarn packing, dipped in cylinder oil, or other approved packing shall be used. Extension stems shall be furnished where shown on the plans or specified herein, together with all necessary guides or supports, bronze bushed.

In general all gate valves, 2-inch and over in size, shall be outside screw and yoke. In particular, however, the thirteen 6-inch gate valves on the drains from the settling tanks shall be of the non-rising stem pattern, with extension stems and hand-wheels, secured by neat guides, bronze bushed.

The 24-inch gate valve on the final discharge of the settling tank effluent into the 42-inch outlet drain, shall be of the plug gate type, with hub ends, non-rising stem, equipped with a neat wheel stand provided with indicator.

A neat floor stand, with hand-wheel and indicator shall be supplied with each of the 12-inch gate valves controlling the flow of sewage to the aeration tanks.

Pipe Supports and Sleeves.

(A192) The Contractor shall furnish at his expense all supports necessary to support the piping and appurtenances in a firm, substantial manner to the lines and grades given by the Engineer. All stirrups, rods, beams, clamps, structural shapes, or pipe columns or other appurtenances, whether shown on the plans or not, shall be furnished to complete the work in a manner satisfactory to the Engineer. The I beams and channels shown in the pipe gallery are shown as the minimum required. The wall end of beams shall be set in pockets left in the concrete, and grouted in at a time subsequent to the pouring of the concrete. The wall end of beams shown shall project six (6) inches into each wall and shall be equipped with bearing plates 6x8x¾ inch size. The beams and plates shall be given at least one (1) shop coat of red lead and two (2) coats of asphaltum or other approved paint in the field. The Contractor shall submit his scheme for supporting the pipes in advance of the work for the approval of the Engineer.

Where shown on the plans, sleeves shall be furnished through the walls, in particular on the sludge return lines, where cast-iron sleeves shall be set in the walls, into which the wrough-iron pipe shall be leaded and calked to make tight. Sleeves shall be furnished on all sluice gate stems where passing through concrete walls, floors or copings as required. These shall be of wrought-iron pipe, unless otherwise specified. All sleeves shall be furnished by the Contractor at his own expense.

Supports for Sludge Pipe.

(A193) The Contractor shall furnish the necessary supports for the sludge piping, as shown on the drawings. The cone shall be made of galvanized genuine wrought iron, No. 12 gage, B. W. G., cut, flanged and riveted to shape. All necessary piping, flanges, clamps, caps, eye bolts, bolts, and wall pieces shall be furnished to make the bracing to brace the vertical sludge pipes in two directions.

The galvanizing shall be done after the cone has been cut, flanged and riveted up.

Erecting Material Furnished by Sanitary District.

(A194) Under Item 21, the Contractor is to unload and erect certain equipment furnished by the Sanitary District as therein specified, including Venturi meters and recording ap-

paratus for measuring sewage, sluice gates and appurtenances. Under Item 20, the Contractor shall connect up the sewage meters with the respective recording apparatus, complete, ready for use. Gate valves shall be furnished at the meters on all pipe lines connecting to the recording apparatus. The sluice gates, operating stands, guides and other appurtenances shall be erected in place, suitably connected to the piping they serve, or secured to the concrete with anchor bolts, as shown on the plans. The lining up of the gates shall be carefully done.

Painting.

(195) After the work is erected and tested, all black iron pipe work, specials, pipe supports and hangers of all kinds, bolts, boltheads and nuts shall be given two (2) coats of asphaltum varnish or other approved paint. Galvanized iron work shall not be painted.

Testing.

(A196) All the piping under this item shall be tested in place for water tightness, so far as is practicable in the opinion of the Engineer. Where piping is to be embedded in concrete, it shall be tested before concrete is poured around the pipe. The test pressures shall be double the maximum working pressure on the pipe. The test pressure shall not drop more than ten (10) per cent in one (1) hour with all valves and connections shut. The Contractor shall furnish, at his own expense, all apparatus, water, and appliances necessary or proper for all tests except the gages. All joints shall be examined and all visible leaks stopped.

Payment.

(A197) The lump sum specified to be paid under Item 20 for the supply effluent, sludge and drain piping shall include the furnishing and placing of all piping, including wrought-iron pipe, cast-iron pipe, specials, flanges, gate valves, and other appurtenances, together with the erection of material furnished by the Sanitary District, complete, in place, as specified, and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 21—ERECTION OF EQUIPMENT.

Description.

(A198) Under Item 21, the Contractor shall receive a lump sum which shall cover the furnishing of all material, labor, tools and appurtenances required to erect in place the equipment specified herein to be furnished by the Sanitary District f. o. b. cars, the Chicago and North-Western Railway, Maywood, Ill. Included shall be the unloading from the cars, transportation to the site of the work, the erection in place, and the protection at all times from the weather. The Sanitary District will order the equipment consigned direct to the Contractor, who shall be responsible for any delays in unloading, and shall pay all demurrage charges which may accrue.

The equipment to be furnished by the Sanitary District comprises:

a. Three (3) vertical centrifugal pumps, with shafting and steady bearings, complete.

b. Six (6) blowers, with separators and appurtenances.

c. One (1) traveling crane.

d. Venturi meters for sewage and air, with indicating and recording apparatus.

e. Sluice gates.

f. Door thickeners.

g. Steel I-beams for pump room floor and travelers in basement.

The Sanitary District expects to be able to deliver the above equipment, to be furnished by other contractors, f. o. b. cars, not later than the expiration of the following time intervals in calender days from the date of the approval of the bond of this Contractor by the Board of Trustees of the Sanitary District:

a. Centrifugal pumps (Division O), 270 days.

b. Blowers (Division R), 270 days.

c. Traveling crane (Division N), 150 days.

d. Venturi meters (Division W). Meter tubes, 120 days. Recording apparatus, etc., 270 days.

e. Sluice gates, 180 days.

f. Door thickeners, 270 days.

g. Steel I-beams, 100 days.

Of this equipment, subheads a to f inclusive will be furnished f. o. b. cars Maywood. The material under subhead g will be delivered at the

site of the work by another contractor.

All anchor or expansion bolts shall be set by the Contractor. All anchor bolts not furnished by the Sanitary District, required under this item, shall be furnished by the Contractor and will be paid for at the unit price specified to be paid per pound under Item 9.

In connection with the erection of the pump, the Contractor shall furnish and erect a complete oiling system as shown in the plans and specified herein.

Unloading.

(A199) Promptly upon receipt of notice from the railroad, the Contractor shall unload the equipment, as shipped, from the cars, and transport it to the site of the work. The bills of lading and lists of material shall be carefully checked by the Contractor in the presence of the Engineer, as the Contractor will be held responsible for the equipment from the time unloading begins until final acceptance. Any shortages or damage at the time of receipt shall be promptly reported to the Engineer. Any shortage or damage found thereafter shall be made good by the Contractor at his expense.

The unloading shall be carefully done in the most approved manner, to avoid injury to the equipment. Ample facilities shall be provided by the Contractor for handling the equipment, including all necessary rollers, block and tackle, blocking, timbers, and a gin pole or other form of hoisting apparatus suitable to the conditions.

Transportation and Protection.

(A200) The equipment shall be transported to the site of the works in trucks or other vehicles of suitable capacity. The equipment shall be protected at all times from weather, dust and dirt. If the pump and blower house is not sufficiently advanced to provide protection for the equipment, the Contractor shall provide temporary housing on the property of the Sanitary District, as the Engineer may direct for all apparatus which may be injured by weather, dust or dirt. The Contractor shall further provide a watchman.

During erection all exposed apparatus or equipment shall be covered and protected from mortar droppings, wet concrete, or other adhering substances, whether from work done by this Contractor or other contractors. At the completion of the work, when it will be no longer exposed to adhering substances, all foreign bodies shall be removed and the final painting done where specified. Any protective coatings of white lead and tallow or other materials used for such purpose shall be removed when and as directed by the Engineer.

a. ERECTION OF PUMPS.

General.

(A201) The Sanitary District will furnish three (3) fourteen inch centrifugal pumps, with shafting, steady bearings and anchor bolts, as shown on the plans. The Contractor shall erect the pumps in place and line them up to the satisfaction of the Engineer, before finally setting the I-beams in the pump room floor, and pouring the floor concrete. The pump suction and discharge flanges shall be bolted up, with gaskets as specified in Section A127. Necessary anchor bolts for the pumps and steady bearings will be furnished by the Sanitary District. All other bolts and erecting material shall be furnished by the Contractor.

Erection.

(A202) The Contractor shall line up each pump and its bearings, at the same time that the pump motor is being lined up by another contractor, so that the common coupling fits and the motor and pump line up perfectly. Bearings shall be scraped if necessary. The Contractor shall be responsible for the proper alignment of bearings. They must run cool, and show a bearing over the entire surface. All journal boxes, pins, keys and other details of the machinery shall be taken apart at any time during the process of erection, when the Engineer may so direct, to allow a thorough examination of the fit and workmanship. All keys shall be driven in the presence of the Engineer. The oil gages shall be set in place on all bearings. All oil reservoirs shall be thoroughly cleaned of all refuse or dirt. The wrench and tool boards shall be mounted on the wall of the superstructure, where the Engineer shall designate.

Oiling System.

(A203) The Contractor shall also furnish and erect a complete oiling system for the three 14-inch centrifugal pumps as shown on the plans and specified herein. This shall consist of a heavy galvanized steel tank holding approximately sixty (60) gallons, provided with inlet and outlet, tapped for wrought-iron pipe, and gage glass and brass gage glass fittings. The outlet shall be so placed that all the oil is available. The inlet shall be fitted with a 2-inch wrought--iron pipe nipple run up through the floor, and provided with a neat floor casting and screw plug, so the tank can be filled from the main operating floor. The tank shall be set on steel hangers as shown on the plans. A main header pipe shall be run from a gate valve placed on the outlet of the oil tank along the wall to the farthest pump. From this header shall be run leads to the upper steady bearing of each pump. At the take off from the header shall be placed on each lead a gate valve, followed by a brass drip and sight feed valve of the Lunkenheimer Co. make or equal. The lead to each pump shall be three-eighths (⅜) inch galvanized genuine wrought iron with galvanized malleable-iron fittings, as specified in Section A173. All galvanized piping for oil shall be reamed out clean. The upper bearing on each pump shall be connected to the lower bearing, and the lower bearing to the bearing at the pump casing, with three-eighths (⅜) inch pipe, the connection being bushed down where ¼-inch taps are shown.

Grouting.

(A204) All bed plates and castings resting on masonry or concrete shall be set and grouted in by the Contractor, to the satisfaction of the Engineer. The Contractor shall be responsible for the proper location and alignment of these parts.

Grout shall be composed of one (1) volume of Portland cement of an approved manufacture and two (2) volumes of approved fine plastering sand. The cement and sand shall be proportioned by measuring and not by estimation. These ingredients shall be thoroughly mixed in a tight box, and water then added, and the mixing continued until the grout has the proper consistency. No greater amount of grout shall be prepared than will be required for immediate use, and any grout that has set shall not be retempered or used in any way in the work.

Joints.

(A205) All joints between stationary parts must be made with the utmost accuracy and precision, insuring perfect and permanent alignment. None of the parts shall be unduly strained in lining up. Dutchmen will not be allowed, except by written permission of the Chief Engineer, and then they shall be made of steel forgings, to his satisfaction.

Where liners are specified and additional liners are needed beyond those furnished to the Contractor, they shall be of steel, cut from one piece, and shall be of different thicknesses down to No. 28 Birmingham gage, as required.

Painting.

(A206) During construction, the various parts of the equipment shall be covered and protected from mortar droppings, wet concrete or other adhesive substances, as far as practicable. After the work has been erected in a satisfactory manner and tested, and when it will no longer be exposed to adhesive substances, or when directed by the Engineer, the work shall be painted as hereinafter specified.

All exposed cast work on the pumps shall be painted in the following manner: All work shall be cleaned thoroughly with benzine and brushes. A good coat of priming shall then be applied. Next the work shall be given two (2) coats of white lead and linseed oil paint of color selected by the Engineer. The interior of all parts of pumps coming in contact with the sewage shall be thoroughly cleaned. Each coat of paint shall be allowed to dry forty-eight (48) hours or longer before the next coat is applied.

All bright surfaces on steel, wrought iron or cast steel work, shall be thoroughly protected from rust and kept free from rust until the work is completed and accepted. Any protective coatings of white lead and tallow or other materials used for such purpose shall be removed when and as directed by the Engineer.

All paint shall be properly stirred before using to secure thorough in-

corporation of the pigments and must be well brushed out in applying to secure a first-class job. Painting and varnishing shall be performed only by skilled workmen. Care shall be taken to protect all work against dust, water or other harmful agency. After the completion of the painting and varnishing work, all paint and varnish spots caused by the Contractor are to be removed from the floors, walls, glass, etc.

Paint Materials.

(A207) The red lead and linseed oil paint specified shall consist of red lead and linseed oil of the quality herein specified, mixed in proportions of twenty-five (25) pounds of dry red lead or thirty-five (35) pounds of red lead paste, to each gallon of oil, with the addition of not over one-half (½) pint of pure turpentine or pure turpentine Japan dryer, or a total of one-half (½) pint of both as permitted by the Engineer. The ingredients shall be thoroughly mixed.

All red lead shall have a true lead content (Pb_3O_4) of at least ninety-five (95) per cent and shall be of such fineness that not less than ninety-nine and one-half (99½) per cent will pass through a two hundred (200) mesh screen. All red lead paste used shall be manufactured from red lead and linseed oil of a purity not less than that herein specified, shall contain at least ninety-two (92) per cent by weight of the specified red lead and shall be capable of standing until used without perceptible hardening. All hardened paste will be rejected.

Paint, oil, varnish, and other materials used in painting shall be of the best quality, and the color of all paint, as well as the brands of all material, shall be satisfactory to the Engineer. All material used in painting or varnishing shall be delivered at the work in the original unbroken containers, bearing the manufacturer's stamp thereon.

All white lead shall be pure hydrated carbonate of lead free from all adulterants, and finely ground in at least eight (8) per cent by weight of pure linseed oil. It shall not contain more than 0.75 per cent of moisture.

All linseed oil shall be pure raw linseed oil conforming to "Standard Specifications of the Purity of Raw Linseed Oil from North American Seed," Serial D-15, adopted in 1915, by the American Society of Testing Materials.

All varnish shall be the Valspar brand or equal.

b. ERECTION OF BLOWERS.

(A208) The Sanitary District will furnish six (6) blower units, complete, with separators and chain drive, together with other appurtenances. Included are four (4) blowers, each of two thousand (2,000) cubic feet per minute capacity, one (1) of one thousand (1,000) cubic feet per minute capacity and one of four hundred and fifty (450) cubic feet per minute capacity. The blowers shall be erected carefully in place, and lined up, with reference to the electric motors, and otherwise as directed by the Engineer. The suction and discharge flanges shall be bolted up to the piping, with rubber gaskets. The blowers and separators shall be shimmed up to the final elevations as specified in Section 6, and then grouted in place as specified in Section A204.

All paint damaged shall be retouched. If the damage is sufficient in the opinion of the Engineer, the Contractor shall repaint the blower or blowers with an approved paint of approved color.

c. ERECTION OF TRAVELING CRANE.

(A209) The Sanitary District will furnish one (1) hand traveling crane of ten (10) tons capacity, together with stops to limit the travel on the crane rails. The crane rails will be erected by another contractor. The Contractor shall erect the crane, complete, ready for use. He shall bolt the stops in place on the rails. He shall keep the crane in good working order during its use by him and shall turn it over to the Sanitary District at the completion of his contract in first-class order.

After erection the crane shall be given two (2) coats of white lead and linseed oil paint as specified in Section A206, of a color to be selected by the Engineer.

d. ERECTION OF VENTURI METERS.

Sewage Meters.

(A210) The Sanitary District will furnish five (5) Venturi meter tubes (one (1) 24x12 inch and four (4) 12x5 inch) to operate in sewage pipe lines, together with recording instruments,

floats, cable and pulleys. The meter tubes are to be set in the pipe lines at the points shown on the plans and bolted in place with rubber gaskets. The meter tubes are to be properly supported, and shall be connected up to the float tubes with piping of the size shown in the plans. The interior of the meters, and connections shall be inspected and left thoroughly clean.

The recording apparatus shall be set up in the place shown on the plans or designated by the Engineer, leveled up and shimmed up, and the bed grouted. Holes shall be drilled in the floor in which the anchor bolts shall be set. The float pulley shall be adjusted on the float tubes, and the floats put in position. The working parts of the apparatus packed for shipment shall be unwrapped and adjusted ready for use.

The handy cabinet furnished with each recording instrument shall be neatly fastened to the wall with round head brass expansion bolts at the point designated by the Engineer.

Air Meters.

(A211) The Sanitary District will furnish twelve (12) Venturi meter tubes (one (1) 24x12 inch, two (2) 10x5 inch, four (4) 10x4 inch, two (2) 4x2 inch, and three (3) 4x1⅝ inch) to operate in air pipe lines, together with seven (7) recording apparatus and five (5) manometer indicators. The meter tubes are to be set in the air lines at the points shown on the plans and bolted in place with rubber gaskets. The meter tubes are to be properly supported and shall be connected up to the recording apparatus or manometers with piping of the size shown on the plans. The interior of the meters and connections shall be inspected and left thoroughly clean.

The recording apparatus shall be set up in the place shown on the plans or designated by the Engineer, leveled up and shimmed up, and the bed grouted. Holes shall be drilled in the floor in which the anchor bolts shall be set. The oil furnished with the apparatus shall be poured in to fill the reservoir to the point designated by the Engineer. Any surplus oil shall be turned over to the Engineer.

The working parts of the apparatus packed for shipment shall be unwrapped and adjusted ready for use.

The handy cabinet shall be secured to the wall as specified in the preceding section. The manometers shall also be secured neatly to the wall in like manner and shall be connected up to their respective meter tubes.

e. ERECTION OF SLUICE GATES.

(A212) The Sanitary District will furnish the Contractor with the sluice gates, guides, extension stems, floor stands and anchor bolts as shown on the plans and listed in Division V. The Contractor shall set the gates in place before the concrete is poured, with anchor bolts. Care shall be taken to prevent springing. The gates shall be carefully lined up. The guides for the extension stems shall be set in place after the forms have been stripped, after the floor stands and extension stems have been lined up. Where necessary, holes shall be drilled and anchor bolts set or calked in with lead, or otherwise secured as ordered by the Engineer. Any leakage around the gate frames shall be taken up by grouting or calking with oakum or lead as may be ordered by the Engineer.

After the work has been erected and tested, and when it will be no longer exposed to adhering substances, all foreign adhering bodies shall be removed and the iron work given one (1) coat of asphaltum varnish or other approved coating.

f. ERECTION OF DORR THICKENERS.

(A213) The Sanitary District will furnish seven (7) Dorr thickener units, knock down, complete, with floor stand, shaft, and radial arms, with anchor bolts. The Contractor shall erect one thickener in each of the settling tanks designed to receive them. He shall line up the vertical shaft, shim up and grout the floor stand and bolt it securely in place, after the pulley has been lined up with the electric motor to be set by another contractor.

When the apparatus has been tested, all exposed parts shall be given two (2) coats of high grade asphaltum varnish or other approved coating.

g. ERECTION OF STEEL I-BEAMS.

(A214) The Sanitary District will furnish the steel I-beams for the main pump room floor, together with the anchor bolts for the electric motors

driving the 14-inch pumps. The Contractor shall erect the I-beams at the time of lining-up the pumps and motors. When the alignment is satisfactory the Contractor shall grout in the I-beams and proceed to complete the reinforced concrete work comprising the floor. During erection the Contractor shall supply all temporary braces, supports, wedges, or appurtenances necessary to adjust the I-beams and hold them in position, until the alignment is adjusted. The anchor bolts for the electric motors shall be delivered on the pump room floor by this Contractor, but will be bolted up and set in place by another contractor erecting the electrical machinery.

The Sanitary District will also furnish the I-beam travelers to go in the pump room basement. The Contractor shall set these in place and shall give them two (2) coats of asphaltum varnish or other approved paint.

Payment.

(A215) The lump sum specified to be paid under Item 21 for the erection of equipment shall include the unloading, transporting and erecting of all equipment and appurtenances, furnished by the Sanitary District, together with the furnishing and placing of other material specified, complete, in place, as specified, and shall include the furnishing and placing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 22—SHEETING.

Description.

(A216) Under Item 22, the Contractor shall leave in place such timbering, sheeting and shoring in open cut as the Engineer may order in writing, cut off as directed, as specified herein. No payment will be made for sheeting and bracing left in place, except where expressly specified herein, and then only when required to be left in place by the Engineer.

Measurement.

(A217) The lumber left in place as timbering, sheeting and shoring by order of the Engineer, will be measured as follows: If lumber used for sheeting and shoring is required to be cut and one-half or more in length is so left in place, the whole amount of such lumber will be included in the measurement and paid for; if less than half of the whole length is left in place, double the amount left in place will be paid for.

Payment.

(A218) For all lumber used for timbering, sheeting and shoring which is left in place by order of the Engineer, the unit price of thirty dollars ($30.00) per thousand feet, board measure, will be paid, which sum is agreed by the Contractor to be full compensation for all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 23—SAND FILL.

Description.

(A219) Under Item 23, the Contractor shall furnish and place the sand fill, as specified herein, to fill the spaces between the sloped bottoms of the settling tanks, as shown on the drawings, and elsewhere on the work as ordered by the Engineer.

Sand for this purpose shall be well graded siliceous material substantially free from particles larger than one-quarter (¼) inch and shall be free from loam and perishable material. It shall be thoroughly tamped or rammed into place to the grades established by the Engineer to form an unyielding foundation. So far as practicable, all fills made of sand shall be flooded with water while in the process of making. If required, the fill may be brought above the finished grade and subsequently excavated thereto. Such excavation shall be paid for under Item 1.

Measurement and Payment.

(A220) Sand fill furnished and placed under this item shall be measured in place within the lines and grades given by the Engineer and paid for at the unit price per cubic yard specified, which price shall include all labor, tools and material required for doing the work. No material excavated on the site of the work and placed in fill as specified under Items 1 and 2 shall be paid for under this item.

ITEM 24—INLET BASINS.

Description.

(A221) Under Item 24, the Contractor shall furnish and build inlet

basins of concrete or brick, complete, as specified herein and shown in detail on the drawings, at the points shown on the drawings or where ordered by the Engineer. The inlet basins shall be connected up to the tile piping.

No payment will be made for excavation or masonry at the unit prices specified under Items 1, 2 and 6 for any excavation or masonry required in inlet basins.

Excavation.

(A222) The excavation, backfilling, and other details shall be as specified in Sections A3 to A23, inclusive, so far as they may apply.

Masonry.

(A223) The Contractor shall furnish all materials for and construct, complete, the inlet basins including all work incidental thereto, of concrete or brick, as shown on the drawings, herein specified and ordered by the Engineer.

Concrete shall be Class B, furnished and placed as specified in Sections A37 to A64, inclusive, so far as the same may apply.

Brickwork shall be made of selected sewer brick, free from lime nodules, neatly laid in a Portland cement mortar composed of one (1) volume cement and three (3) volumes sand, in which ten (10) per cent by volume of freshly slaked lime may be thoroughly mixed. All joints shall be thoroughly filled with mortar. All inside joints shall be neatly scraped, and all droppings removed.

Frame and Grating.

(A224) The Contractor shall furnish and place the cast-iron frame and grating. All frames and gratings shall be given two (2) field coats of approved asphaltum varnish and set in position. All frames and gratings will be paid for at the unit price per pound specified to be paid under Item 10.

Payment.

(A225) The sum specified to be paid per inlet basin under Item 24, shall include the excavation, the furnishing and placing of the masonry, and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 25—GALVANIZING.

Description.

(A226) Under Item 25, the Contractor shall clean and galvanize cast-iron pipe and specials, furnished in the air piping under Item 19, as shown on the plans or specified herein, when and as ordered by the Engineer. Included shall be all costs of handling, teaming, rethreading tap holes and all expenses incidental to galvanizing.

No payment will be made under this item for any galvanizing required or specified on any part of the work, other than for the cast-iron pipe and specials in the airline as herein specified.

The cast-iron pipe and specials to be galvanized shall be thoroughly cleaned and pickled, and then shall be acceptably coated with zinc which shall uniformly cover all parts of the material. The hot process of galvanizing shall be used. The galvanizing shall be done after the holes have been drilled and tapped for the 1½-inch connections. The threads in the taps shall be recut neatly to avoid breaking the zinc coating.

Measurement.

(A227) The amount of galvanizing to be paid for will be the number of pounds of material galvanized, weighed before galvanizing, or calculated from the weights given for the material of the size and classes handled, as specified in the American Waterworks Association standard specifications.

Payment.

(A228) The sum specified to be paid per pound of material galvanized under Item 25 shall include the handling, cleaning, pickling, galvanizing, and all expenses incidental thereto, and shall include the furnishing and placing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove ob-

structions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Village Ordinances.

Art. 2. The said Contractor agrees to carry on all work provided for in this contract in strict conformity with the ordinances and rules passed by the Villages of Maywood and Broadview covering the construction of said work, and to conform to all other regulations or ordinances of said villages, and to furnish to the Sanitary District, at his own expense, all permits and certificates required by said villages.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Approximate Quantities.

Art. 4. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the plans mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Examination of Site.

Art. 5. All bidders for the work under this contract are required before submitting proposals to examine the site of the work and adjacent premises, and the various means of approach to the site, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing the equipment at the pumping station and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Interference.

Art. 6. The Contractor shall so conduct the work of installation that there shall be no interference with work which may be in progress under contracts with other contractors. In case of dispute between the Contractor and other contractors employed by the Sanitary District, the decision of the Chief Engineer shall be final and binding.

The Contractor shall, at his own expense, repair any damage to machinery, equipment, masonry, building, painting or other property of the Sanitary District or under construction by other contractors, occasioned by the Contractor in the execution of this contract.

The disposal of tools, material, machinery, and other supplies and ap-

purtenances during storage and erection on the property of the Sanitary District shall be subject to the approval of the Engineer. The Contractor shall assume all responsibility for the security of everything he may have on the property of the Sanitary District.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month

Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All inspection of any and all material furnished for use in work to be performed under Division A, shall be made at the site of the work after delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay the Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the extra time expended in performing any such inspection at such other points.

Under Division C, all structural steel work will be inspected, however, without expense to the Contractor, if all the structural steel is fabricated in one shop.

Under Division O, the fabrication of material will be inspected at the shop or shops where fabricated. The Engineer shall have full access at all times to all parts of the shop where material under his inspection is being manufactured. If ordered by the Chief Engineer, the Engineer shall stamp each piece accepted with a private mark and any piece not so marked may be rejected at any time and at any stage of the work. If the Engineer, through an oversight or otherwise has accepted material or work which is contrary to the specifications, this materal may be rejected, regardless of the stage of completion.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing

the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

(Divison A) The Contractor shall be guided by the lines, stakes marks and grades given by the Engineer and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art. 12. All books and accounts kept by the Contractor in connection with this contract shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, the cost of repairs to machinery, and other information required by the Engineer. The Contractor shall, on request furnish the Engineer with copies of expense bills for transportation charges on all machinery, material and supplies shipped to or from the work under this contract.

Plant.

Art. 13. The Contractor shall furnish all material and supplies, plant, staging and falsework tools and implements, teams, and care; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract and shall furnish and maintain subject to the approval of the Engineer, all necesary barricades, and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the lump sum or unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 14. Whenever the Contractor shall be permitted or directed to perform work at night, or on Sundays or a holiday, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 15. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, staging, falsework, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 16. The Contractor shall take whatever precaution that may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident from any cause, or to avoid contingencies

which are liable to delay the completion of the work.

Superintendence.

Art. 17. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer, who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and plans and the orders of the Engineer thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools, and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer.

Workmen.

Art. 18. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 19. In accordance with the rules and regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employees such regulations in regard to cleanliness and the disposal of garbage and wastes, as shall conduce to their health, and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the property of said Sanitary District, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmlesss said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the

execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912"; approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Co-operation.

Art. 26. It is understood and agreed that all work shall be executed in such manner and in such order or procedure as will permit of the commencement and carrying on of work of the Sanitary District and of other contractors with the least interference possible under a reasonable procedure whenever it is necessary or desirable to prosecute said work, either simultaneously with the work under this contract or otherwise. To this end the Contractor shall co-operate with and assist the Sanitary District and other contractors in every reasonable way and shall interfere as little as possible with their work in order to expedite all work of construction of the Desplaines River Sewage Treatment Works and all work collateral thereto, including construction of the Desplaines River Sewage Treatment Works and appurtenances. The Contractor shall so arrange his work, plant and equipment that work of the Sanitary District and of other contractors for the Sanitary District can be performed without unnecessary or unreasonable expense on account of the work, plant or equipment of the Contractor hereunder. The Contractor shall move, free of charge, his plant and equipment or any part of same whenever the Engineer shall consider reasonable and necessary for the work of the Sanitary District or other contractors. The Contractor when requested by the Engineer shall also furnish the Sanitary District and other contractors with material and with the use of plant and equipment of the Contractor at reasonable rates therefor, whenever in the opinion of the Engineer such use of such plant and equipment will not unreasonably delay or interfere with the work under this contract.

The Contractor shall not be entitled to any damages or to any anticipated profits on work dispensed with or to any extra compensation from the Sanitary District on account of any work performed by the Sanitary District, or other contractors, that is contemplated in these specifications, or on the plans, or that is necessary for carrying on or completion of or that in any way affects the work under this contract, provided that such work of the Sanitary District and other contractors, in the opinion of the Engineer, is performed in a proper and expeditious, or a necessary manner. The Engineer shall decide all questions between the Contractor and the Sanitary District or other contractors, and the order of carrying on the work shall always be subject to the Engineer's direction and approval. His decision upon all questions relating thereto shall be final and binding on both parties to this contract.

In case the Contractor, by his own acts or the acts of any person or persons in his employ, shall unnecessarily delay, in the opinion of the Engineer, the work of the Sanitary District or other contractors by not properly co-

operating with them or affording them sufficient opportunity or facilities to perform work, as hereinbefore specified, the Contractor shall, in that case, pay all costs and expenses incurred by such parties, due to any such delays, and hereby authorizes the Sanitary District to deduct the amount of such costs and expenses from any moneys due or to become due him under this contract. The Engineer shall decide the extent of such delay or delays and amount of such costs and expenses and his decision shall be final and binding upon both parties to this contract. Nothing contained in this paragraph shall, however, relieve said Contractor from any liability or damages resulting to the Sanitary District on account of such delay or delays.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division A hereby agrees to begin work first on the substructure of the pump and blower house, and have the same ready to receive the building superstructure on or before September 1, 1919. The Contractor further agrees to erect the crane and other equipment promptly, as soon as the structure is ready to receive it, and to complete the entire work within five hundred and forty (540) calendar days from the said date of approval of bond. He further agrees to build the road promptly and have it ready for traffic on or before August 15, 1919.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division A within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Thirty Dollars ($30.00) under Division A, for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of Thirty Dollars ($30.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay, or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States Government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract—Division A.

Art. 32. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character and in the time herein specified; or if said Contractor shall fail financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by said Contractor; or if the Contractor shall lose control of said work for any cause whatsoever except by the act of God, the United States Government or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer, or if in the opinion of the Engineer, the Contractor refuses or neglects to use measures to protect the said work from damage; or if, in the opinion of the Engineer, the Contractor is guilty of carelessness or incompetency in the execution of said work; or if, in the opinion of the Engineer the said work has been or is being delayed by the Contractor; or if, in the opinion of the Engineer, the rate of progress is not such as to insure the completion of the work within the time specified; or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed; or that the Contractor is wilfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Sanitary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or

any part thereof, as may be designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in this article specified, the said Sanitary District shall have a lien upon all the equipment, material, supplies, machinery, implements and tools of the Contractor then existing on the premises of said Sanitary District for the purpose hereinafter specified; and the said Sanitary District may thereupon immediately take possession of all said equipment, material, supplies, machinery, implements and tools for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract, and in completing the said work by contract the Sanitary District may use such equipment, materials, supplies, machinery, implements, tools and plant. as above specified, as may be the property of said Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other contractors if all or any part of said work is completed by contract, and any sum or sums of money paid by the Sanitary District in hiring men and teams, machinery, implements, tools and plants, and any sum or sums of money paid by the Sanitary District for the purchase of equipments, materials, supplies, machinery, implements, tools and plant, and the cost of repairs or replacements thereto; and all cost of repairs and replacements upon machinery, implements, tools and plant of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance, and as compensation for accidental injuries or death suffered by employees in the course of their employment in the performance of said work under the Employers' Liability Act of the State of Illinois, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the said Sanitary District out of any moneys that may be due or may at any time thereafter become due to the said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid, then the Sanitary District may sell all materials, supplies, machinery, implements, tools and plant then on hand, whether obtained from the Contractor or by purchase, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of the said property at such sale shall be credited to the Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and his bondsmen shall be liable to pay the amount of said deficiency; and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 34. Division A. The Contractor shall furnish a maintenance bond, as specified in Section 10, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of those sections. The execution of said maintenance

bond shall be a condition precedent to the final payment specified in Article 37. The maintenance bond shall be in the amount of two (2) per cent of the amount of this contract for one (1) year only.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Article 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION A.

SEWAGE TREATMENT PLANT.

(1) For earth excavation, including the disposal of excavated material, complete, as specified, the sum of two dollars and twenty cents ($2.20) per cubic yard.

(2) For rock excavation, complete, including the disposal of excavated material, complete, as specified, the sum of three dollars and no cents ($3.00) per cubic yard.

(3) For macadam pavement, in place, complete, as specified, the sum of two dollars and eighty-five cents ($2.85) per square yard.

(4) For gravel or stone walks, in place, complete, as specified, the sum of two dollars and no cents ($2.00) per square yard.

(5) For concrete, Class A, complete, in place, as specified, the sum of sixteen dollars and no cents ($16.00) per cubic yard.

(6) For concrete, Class B, complete, in place, as specified, the sum of sixteen dollars and no cents ($16.00) per cubic yard.

(7) For concrete, Class C, complete, in place, as specified, the sum of fifteen dollars and no cents ($15.00) per cubic yard.

(8) For reinforcing steel, in place, as specified, the sum of no dollars and four and three-fourths cents ($0.0475) per pound.

(9) For miscellaneous steel, in place, as specified, the sum of no dollars and twelve cents ($0.12) per pound.

(10) For iron castings, in place, as specified, the sum of no dollars and nine cents ($0.09) per pound.

(11) For six (6) inch cast-iron water pipe, laid in place, complete, as specified, the sum of two dollars and eighty-four cents ($2.84) per lineal foot.

(12) For cast-iron pipe, laid in place, complete, as specified, the sum of no dollars and eleven and one-half ($0.115) per pound.

(13) For 8-inch tile pipe, laid in place, complete, as specified, the sum of two dollars and eighty-eight cents ($2.88) per lineal foot.

(14) For 12-inch tile pipe, laid in place, complete, as specified, the sum of two dollars and ninety-five cents ($2.95) per lineal foot.

(15) For 30-inch tile pipe, laid in place, complete, as specified, the sum of seven dollars and forty-seven cents ($7.47) per lineal foot.

(16) For tile underdrains, laid in place, complete, as specified, the sum of no dollars and eighty cents ($0.80) per lineal foot.

(17) For pump and blower house substructure, in place, complete, as specified, except for such work as is covered by unit prices under Items 1 to 16, inclusive, above, all as specified, the lump sum of ninety-two hundred dollars and no cents ($9,200.00).

(18) For the tank equipment, in place, complete, as specified, the lump sum of thirty-four thousand dollars and no cents ($34,000.00).

(19) For the air piping, in place, complete, as specified, the lump sum of thirty-seven thousand five hundred dollars and no cents ($37,500.00).

(20) For the supply, effluent, sludge, and drain piping, in place, complete, as specified, the lump sum of thirty thousand seven hundred dollars and no cents ($30,700.00).

(21) For the erection of equipment, in place, complete, as specified, the lump sum of four thousand dollars and no cents ($4,000.00).

(22) For the sheeting, shoring, bracing or other timbering left in place, as specified, by order of the Engineer, the sum of thirty dollars and no cents ($30.00) per thousand feet, board measure.

(23) For sand fill, in place, as specified, the sum of three dollars and no cents ($3.00) per cubic yard.

(24) For inlet basins, in place, as specified, the sum of fifty dollars and no cents ($50.00) per basin.

(25) For galvanizing cast-iron pipe, as specified the sum of no dollars and three cents ($0.03) per pound.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 36. Division A. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulation, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sani-

tary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President to be duly attested and its corporate seal to be hereunto affixed.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Finance Committee.
Attest:
JOHN MCGILLEN,
(Seal) *Clerk.*

LEYDEN-ORTSEIFEN COMPANY (Seal)
By THOMAS F. H. LEYDEN,
President.
Attest:
A. J. ORTSEIFEN,
Secretary.
Approved May 1, 1919:
H. I. STEFFA,
Mechanical Engineer.
LANGDON PEARSE,
Sanitary Engineer.
F. L. BARRETT,
Architect.
G. S. BRACK,
Electrical Engineer.
G. M. WISNER,
Chief Engineer.
CHAS. E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, the Leyden-Ortseifen Company, a coporation organized under the laws of the State of Illinois as principal, and New Amsterdam Casualty Company, as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of one hundred ninety-two thousand, one hundred forty dollars and sixty-three cents ($192,140.63), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden Leyden-Ortseifen Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing, delivering and installing the Sewage Treatment Plant at the Desplaines River Sewage Treatment Works in the Village of Broadview, County of Cook, State of Illinois, as specified under Division A of the attached contract.

Now, If the said Leyden-Ortseifen Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Leyden-Ortseifen Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago be reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and

administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto which may accrue to each and every person who shall be employed by said Leyden-Ortseifen Company, in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Leyden-Ortseifen Company, or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Leyden-Ortseifen Company, shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Leyden-Ortseifen Company (Seal)
By Thomas F. H. Leyden,
President.

Attest:
A. J. Ortseifen,
Secretary.

New Amsterdam Casualty Co. (Seal)
By Charles E. Bennett,
Attorney-in-Fact.

Approved as to Form May 1, A. D. 1919:
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Finance reports that it has examined and approved the bond of the Hutchins Lumber and Storage Company with the New Amsterdam Casualty Company thereon as surety for the faithful performance of its contract for furnishing and delivering Oregon fir timber to The Sanitary District of Chicago, and therefore recommends the passage of the following order:

Ordered, That the bond of the Hutchins Lumber and Storage Company, for the faithful performance of its contract for furnishing and delivering said timber to The Sanitary District of Chicago, said bond being in the penal sum of $2,000.00, be, and the same is hereby, approved; and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
Jas. H. Lawley,
Chairman.

Matt A. Mueller,
Willis O. Nance,
George W. Paullin,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

The following is the contract and bond of the Hutchins Lumber & Storage Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR FURNISHING AND DELIVERING TIMBERS FOR TRESTLES FOR SUPPORTING TRACKS OF THE GRAND TRUNK WESTERN RAILWAY COMPANY AT THE CALUMET-SAG CHANNEL, IN BLUE ISLAND, ILLINOIS.

THIS AGREEMENT, Made and entered into this first day of May, AD 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and Hutchins Lumber and Storage Co., a corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District and under the penalty expressed in the bond hereto attached, at his proper cost and expense to furnish all materials, tools, labor, and transportation charges free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for Furnishing and Delivering Timbers for Trestles for Supporting Tracks of the Grand Trunk Western Railway Company at the Calumet-Sag Channel in the City of Blue Island, County of Cook, State of Illinois.

The material furnished shall be strictly pursuant to and in conformity with the specifications herein contained. It is covenanted and agreed that all material shall be furnished and delivered subject to the supervision and inspection of the Chief Engineer of The Sanitary District of Chicago and his properly authorized agents, by whose measurements and calculations the quantities of material furnished under this contract shall be determined and on whose inspection all material shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District shall have full power to reject or condemn all materials furnished and delivered under this contract which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between The Sanitary District and said Contractor that said Engineer shall determine and decide all questions in relation to the furnishing and delivery of said material and his decision shall be final and binding upon both parties to this contract.

Wherever the words "Chief Engineer," or "Engineer" are used herein, spelled with a capital "E", they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other Engineer designated by said Chief Engineer.

Wherever the word "Contractor" is used, spelled with a capital "C", it shall be understood to refer to the Contractor under this contract.

SPECIFICATIONS.

General.

SECTION 1. The material to be furnished under this contract consists of timber stringers, caps, posts, sway braces, ties and guard timbers for pile and timber trestles to be constructed by or for The Sanitary District to carry railroad tracks to and across the Calumet-Sag Channel in the westerly part of the City of Blue Island, Illinois. The quantity of each size of material to be furnished by the Contractor is to be as follows, to-wit:

Item A—80 stringers 8″x16″x24′ long.
Item B—80 stringers 8″x16″x26′ long.
Item C—50 caps 12″x14″x14′ long.
Item D—80 posts 12″x12″x18′ long.
Item E—600 ties 8″x8″x14′ long and surfaced one side and one edge or surfaced four sides.
Item F—80 sway braces 3″x12″x24′ long.
Item G—60 guard timbers 4″x6″x20′ long.

Delivery.

SEC. 2. All material furnished under this contract shall be delivered to The Sanitary District free on board cars on a side track designated by the Engineer, either of the Baltimore & Ohio Chicago Terminal Railroad Company or of the Grand Trunk Western Railway Company as the Contractor may elect, situated between Vermont Street and Broadway, or near Broadway, in the western part of Blue Island, Illinois. All freight and switching charges, including the established war tax on same, for such delivery as specified, shall be covered by the prices hereinafter specified. In case the freight and switching charges on material delivered to The Sanitary District under this contract are not subject to

war tax, and the war tax thereon is not paid by the Contractor, then the Sanitary District shall receive credit for the amount of such war tax and the amount of same shall be deducted from the payments to be made by The Sanitary District to the Contractor under this contract.

Material.

SEC. 3. Timber to be delivered to The Sanitary District under this contract shall be either "Douglas Fir" or "Southern Yellow Pine," as The Sanitary District may elect, provided prices are specified herein for both Yellow Pine and Douglas Fir timber, but all pieces included in any one item herein mentioned shall be of the same kind of timber unless otherwise agreed between the Engineer and the Contractor.

DOUGLAS FIR TIMBER.

General Requirements.

SEC. 4. Douglas Fir shall include yellow and red Douglas Fir. White Douglas Fir will not be accepted. All timber shall be live, sound, straight and close grained, cut square cornered, full length, rough sawed unless otherwise ordered by the Engineer, and not more than ¼ inch scant in any dimension for rough timber or more than ½ inch scant for dressed timber. All timber shall be free from large, loose or unsound knots, knots in groups, or other defects that will materially impair its strength for the purpose for which it is intended.

Stringers.

SEC. 5. Stringers shall show not less than 85 per cent. heart on each side and edge, measured across the surface anywhere in the length of the piece. Stringers shall be out of wind and free from shakes, splits, or pitch pockets over ⅜ inch wide or 6 inches long. Knots greater than 2 inches in diameter will not be permitted within one-fourth of the depth of the stringer from any corner nor upon the edge of any piece. Knots shall in no case exceed 3 inches in diameter.

Caps and Posts.

SEC. 6. Caps and Posts shall show not less than 85 per cent. heart on each of the four sides, measured across the surface anywhere in the length of the piece, which shall be out of wind and free from shakes, splits, or pitch pockets over ½ inch wide or 6 inches long. Knots shall not exceed one-fourth of the width of the surface of the piece in which they occur and shall in no case exceed 3 inches in diameter.

Ties.

SEC. 7. Ties shall show one side and one edge all heart. The other side and edge shall show not less than 85 per cent. heart, measured across the surface anywhere in the length of the piece.

Guard Timbers and Sway Braces.

SEC. 8. Guard Timbers and Sway Braces shall be sound and square edged with no knots larger than 2½ inches in diameter.

Investigations.

SEC. 14. All bidders for furnishing material under this contract are required, before submitting proposals, to become thoroughly familiar with all requirements of the specifications and form of contract and to inform themselves thoroughly as to the facilities for the delivery of the specified material and as to the freight and switching charges that must be paid for such delivery, as specified. No plea of ignorance of conditions that exist or that may hereafter exist will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract or will be accepted as a basis for any claims whatsoever for extra compensation or for extension of time for delivery of all or any part of said material.

Inspection and Supervision.

SEC. 15. All material to be furnished and delivered under this contract shall be subject to the inspection of the Engineer and his properly authorized agents, at the time when and where unloaded by The Sanitary District; provided that, if requested by the Contractor, the Engineer may at his option perform or have performed inspection of material at other points than as above specified in this section hereof. In any such case, the Contractor shall pay to The Sanitary District the extra cost, if any, to The Sanitary District, as determined by the Engineer, of making such inspection at any points other than as hereinabove specified for its performance.

Responsibility of Contractor.

SEC. 16. The Contractor shall be responsible for all material furnished under this contract until such material, of the kind and quality herein specified, shall have been delivered to The Sanitary District in good condition at the

points and in the manner herein specified, and shall make good or replace, to the satisfaction of the Engineer, any material that has been damaged, lost or is missing at any time before delivery or when delivered as specified. The Contractor shall not assign by power of attorney or otherwise any portion of the money that may become due to him through the performance of this contract.

Damages and Liens.

SEC. 17. The Contractor agrees to pay all damages to any person or persons or property growing out of any act, doing or omission of himself or of his servants, agents, or employes, that are in the nature of a legal liability, and agrees to indemnify and save The Sanitary District harmless against all suits or actions of every name and description brought against The Sanitary District on account of such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employes in the performance of this contract. Said Contractor further agrees to protest and save The Sanitary District harmless against all liens of every description that may be placed upon any material furnished or delivered under this contract. Said Sanitary District is hereby authorized and empowered by said Contractor to retain so much of any sum of money that may be due or that may become due to the Contractor from the Sanitary District under this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, until said lien or liens or said suit or suits or claims for damages have been settled and evidence to that effect shall have been furnished to the satisfaction of said Board of Trustees.

Employers' Liability Act.

SEC. 18. The Contractor further agrees to insure to his employes or their beneficiaries, the necessary first aid, medical, surgical and hospital services, and the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this state by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or deaths suffered by any of his employes in and about the performance of this contract.

Time.

SEC. 19. The Contractor agrees to furnish and deliver material of the character and in the manner herein specified as follows:

1. At least twenty-five (25) per cent. of the total amount of material under each item hereinafter specified shall be delivered as specified on or before the expiration of twenty (20) calendar days after the date when this contract is signed by both parties hereto.

2. At least fifty (50) per cent. of the total amount of material under each item hereinafter specified shall be delivered as specified on or before the expiration of forty (40) calendar days after the date when this contract is signed by both parties hereto.

3. All material shall be delivered as specified on or before the expiration of sixty (60) days after the date when this contract is signed by both parties hereto.

Forfeiture of Contract.

SEC. 20. It is further agreed by and between the parties hereto that time is of the essence of this contract and that if said Contractor abandons this contract or fails financially, or from any other cause whatsoever is unable to carry out the terms and conditions of this contract and is unable to complete the whole or any specified part of same in the time or times specified herein, or if he assigns this contract without the consent of The Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may re-advertise for bids for furnishing and delivering the whole or the balance of the material herein specified and award a contract therefor to the lowest responsible

bidder, or The Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material if the same is obtained by awarding a new contract therefor or if so purchased on the open market and all costs and expenses incurred by The Sanitary District in purchasing and delivering such material in excess of the cost hereunder to said Sanitary District, shall be paid to The Sanitary District by said Contractor.

Extension of Time.

SEC. 21. In case the amount of material ordered by the Engineer under any one or more of said items is greatly in excess of the amount shown under the same items in the schedule included in "Requirements for Bidding and Instructions to Bidders" attached hereto, or in case the sizes or lengths of pieces of timber ordered by the Engineer under any one or more of said items are not the same as the sizes or lengths shown under the same items in said schedule, thereby requiring, in the opinion of the Engineer, more time to furnish and deliver same than would be required to furnish and deliver timber of the amounts or of the sizes or of the lengths set forth in said schedule, then the time for delivery of all of the timber in excess of the amount shown in said schedule, or the time or times for delivery of timber of any size or length that is different from the size or length shown in said schedule, shall be extended by such period or periods of time as may be fixed by the Engineer as equivalent to the additional time required to deliver material as ordered by the Engineer.

Should the Contractor be obstructed or delayed in the furnishing and delivering of any or all of said material by order of the Engineer or by any act or delay of The Sanitary District, or by any act or delay of Railroad Companies in furnishing cars for loading said material or in transporting, switching or delivering cars loaded with said material, or by War Boards or Councils of the Federal Government or by Federal Administrators, or by riot, insurrection, war, pestilence, fire, lightning, earthquake, cyclone, floods, acts of public authorities, or by other causes that, in the opinion of the Engineer, are entirely beyond the control of the Contractor, then the period or periods of time herein fixed for the completion of delivery of all or of any specified part of said material shall be extended for a period or periods of time equivalent to the period or periods of time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless the Contractor shall have notified the Engineer in writing of said delay or delays within seven (7) days after the commencement of same.

It is further agreed that the Contractor shall not be entitled to any damages or compensation from The Sanitary District on account of any delays resulting from any of the causes specified in this section of this contract, except for extra premiums on his bond actually paid by said Contractor on account of delays caused by The Sanitary District. The Chief Engineer shall decide the number of days that the Contractor has been delayed and his decision shall be final and binding upon both parties to this contract.

Contractor's Bond.

SEC. 22. The Contractor shall furnish a bond in the sum of two thousand dollars ($2,000.00) for the performance of this contract, with good and sufficient sureties satisfactory to the Board of Trustees of The Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of said Board of Trustees, insufficient surety for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in the sum of two thousand dollars ($2,000.00), with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

SEC. 23. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the materials, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every descrip-

tion connected with the work; and for well and faithfully completing the work, and the whole thereof, in full compliance with the specifications and the requirements of the Engineer under them, to-wit:

OREGON FIR TIMBER.

Item A. For Stringers 8"x16"x24' long the sum of Fifty and no/100 dollars ($50.00) per 1,000' B. M.

Item B. For Stringers 8"x16"x26' long, the sum of Fifty and no/100 dollars ($50.00) per 1,000' B. M.

Item C. For Caps 12"x14"x14' long, the sum of Forty-eight and no/100 dollars ($48.00) per 1,000' B. M.

Item D. For Posts 12"x12"x18' long, the sum of Forty-six and no/100 dollars ($46.00) per 1,000' B. M.

Item E. For Ties 8"x8"x14' long, surfaced one side and one edge or surfaced four sides, the sum of Forty-four and no/100 dollars ($44.00) per 1,000' B. M.

Item F. For Sway Braces 3"x12"x24' long, the sum of Forty-four and no/100 dollars ($44.00) per 1,000' B. M.

Item G. For Guard Timbers 4"x6"x20' long, the sum of Forty-four and no/100 dollars ($44.00) per 1,000' B. M.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete this contract in all its details, as herein specified. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreement. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

SEC. 24. The Sanitary District will pay to the Contractor on or before the twentieth (20th) day of each month ninety (90) per cent. of the value, computed at the rates and prices herein specified, of all material of the sizes and lengths ordered by the Engineer and of the quality herein specified that is properly delivered to The Sanitary District in the manner herein specified, during the previous month. The remaining ten (10) per cent. of the value of said material will be retained by The Sanitary District as part security for the faithful performance of this contract and shall not become due to the Contractor until thirty (30) days after the completion of this contract and the delivery of the final certificate of the Engineer and after the payment by the Contractor of all claims for labor, material and transportation furnished in the performance of this contract.

Final Payment.

SEC. 25. The said Contractor further agrees that he shall not be entitled to demand or receive final payment hereunder, except in the manner set forth in this agreement, and not until said contract has been completed and all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and the delivery of such certificate, pay and it hereby binds itself to pay, to said Contractor, in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and except such sum or sums of money as may be lawfully retained under any of the provisions of this contract hereinbefore set forth.

SEC. 27. This agreement shall be binding upon the heirs and legal representatives of the said Contractor.

IN WITNESS WHEREOF, On the day and year first above written, the party of the first part has caused these presents to be executed in duplicate by the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President and to be duly attested and its corporate seal to be hereunto affixed.

THE SANITARY DISTRICT OF CHICAGO,
By JAS. H. LAWLEY,
Chairman of its Committee on Finance.
Attest:
JOHN MCGILLEN, (Seal)
Clerk.
HUTCHINS LUMBER & STORAGE CO.,
By E. R. HUTCHINS,
President.

Attest:
C. B. HUTCHINS, (Seal)
Secretary.
Approved May 1, 1919.
C. R. DART,
Chief Bridge Engineer.
G. M. WISNER,
Chief Engineer.
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, that we, Hutchins Lumber and Storage Co., as principal, and New Amsterdam Casualty Company, as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of two thousand dollars ($2,000.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above bounden Hutchins Lumber and Storage Co. has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, transportation charges, appliances and appurtenances necessary for furnishing and delivering timbers for trestles for supporting tracks of The Grank Trunk Western Railway Company at the Calumet-Sag Channel, in the City of Blue Island, County of Cook, State of Illinois.

Now, if the said Hutchins Lumber and Storage Co. shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Hutchins Lumber and Storage Co., its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall repay any overpayments and shall pay all valid claims and demands whatsoever, including all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Hutchins Lumber and Storage Co. in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Hutchins Lumber and Storage Co. or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory there-

of and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Hutchins Lumber and Storage Co. shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

HUTCHINS LUMBER & STORAGE CO. (Seal.)

By E. R. HUTCHINS,
President.

NEW AMSTERDAM CASUALTY CO. (Seal.)
By CHARLES E. BENNETT,
Attorney-in-fact.

Approved as to Form May 1, A. D. 1919:
CHARLES E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, May 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contract with the Forest Park Amusement Company, a corporation, Forest Park, Illinois, wherein said company agrees to take, and The Sanitary District agrees to furnish, 300 kilowatts of electrical energy for lighting and power purposes for the time and upon the terms and conditions therein set forth, which contract has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contract, which has heretofore been executed by said Forest Park Amusement Company.

Respectfully submitted,
H. E. LITTLER,
Chairman.

WM. J. HEALY,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, May 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Engineering Department—

F. W. Mohlman, Chemist, $250.00 mo.

Thos. D. Burke, Rodman, $100.00 mo.

M. Vincent Gottschalk, Rodman, $100.00 month.

Stanley J. Dubel, Laborer, $96.00 mo.

Henry DeGraza, Laborer, 45c per hour.

Carl Newman, Laborer, 45c per hour.

Dominick Albano, Laborer, 45c per hour.

P. Carlin, Sub-foreman, 60c per hour.

M. Ryan, Carpenter Helper, 50c per hour.

L. Bobus, Painter, 87½c per hour.

I. G. McMurphy, Watchman, 40c per hour.

REINSTATEMENT.

Police Department—

John J. Burke, Patrolman, $115.00 mo.

INCREASE.

Provided for in 1919 Budget.

Electrical Department—

J. C. Kraiss, Painter, from 75c hour to 87½c per hour.

REINSTATEMENT.

Due to honorable discharge from the U. S. Army Service.

Engineering Department—

H. J. Curtis, Instrument Man, $150.00 month.

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Passed and not voting—Mr. Sergel—One.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a petition from various property owners and taxpayers of the Village of Shermerville, Ill., and vicinity, requesting relief from the conditions existing in the north branch of the North Branch of the Chicago river on account of its stagnation, and requesting that same be straightened and dredged.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Carr presented the following resolution:

CHICAGO, Ill., May 1, 1919.

WHEREAS, Nothing is being done toward the construction of a bridge over the main channel of the Sanitary District at Crawford avenue, and the California avenue bridge project is awaiting a decision by the City of Chicago on the question of whether it will accept a bascule bridge; and

WHEREAS, It is urgent that work on these bridges be commenced at the earliest possible date. Residents of the territory affected have been before the Board at various times urging that the bridges be built. They are looking to The Sanitary District for relief that is imperative if progress is not to be blocked in the southwest section of the city; and

WHEREAS, There is no legal impediment at Crawford avenue because the Board of Trustees of The Sanitary District was given the power to build that bridge by legislative enactment upheld by the Supreme Court, and if there is any doubt about the right of the District to build the California avenue bridge, enabling legislation should be procured from the General Assembly now in session; and

WHEREAS, Appropriations were made in the 1919 budget for this work and there is no substantial reason for the District not proceeding as rapidly as possible with the construction, the type of the bridges not being so important

as the prompt construction of them; therefore be it

Resolved, That the time has come for the Board to act and the Board should at once decide all undetermined questions so that the work may be pushed to completion.

Mr. Carr moved that the resolution be referred to the Committee on Engineering.

The motion prevailed.

ADJOURNMENT.

Mr. Littler moved that the Board adjourn.

The motion prevailed.

John W. Gillon,

Clerk.

C455

JUL 19 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, MAY 8, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

BIDS.

The Clerk opened and read the bids received for a five-ton motor truck for the Electrical Department as shown in the following schedule of bids:

THE SANITARY DISTRICT OF CHICAGO.

PROPOSALS RECEIVED FOR FIVE TON MOTOR TRUCK.

May 8th, 1919.

No. of Bid	Names and Address of Bidders	Deposit	Price of Truck
1	Signal Motor Truck Co.....Chicago...	$100.00	$5,154.80
2	Hall Truck Sales Co.....Chicago...	100.00	4,750.00
3	Republic Motor Truck Co.....Chicago...	100.00	6,183.50
4	Commercial Tire & Auto. Co.....Chicago...	100.00	5,995.00
5	Chicago Oneida Truck Co.....Chicago...	100.00	5,755.97
6	The White Company.....Chicago...	100.00	5,490.00
7	General Motors Truck Co., Pontiac, Michigan..	100.00	5,833.00
8	James Motor Co.....Chicago...	100.00	5,864.95

Mr. Lawley moved that the bids be referred to the Electrical Engineer for tabulation and to the Committee on Finance for report.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the Regular Meeting of April 24, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented his report of money received and deposited with the Treasurer during the month of April, 1919, which was ordered published and filed, as follows:

CHICAGO, May 8, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of Two Hundred and Twenty-five Thousand Six Hundred and Ninety-five and Six One-hundredths ($225,695.06) Dollars, during the month of April, 1919, from the following sources:

John Westreicher, Collector, City of Evanston, account 1918 taxes	$ 27,612.17
Timothy J. Buckley, Collector, Town of Cicero, account 1918 taxes	18,087.55
G. Whittier Gale, Collector, Town of Oak Park, account 1918 taxes	16,327.96
Hoyt King, Collector, Town of New Trier, account 1918 taxes	12,829.27
Henry Groh, Collector, Town of Berwyn, account 1918 taxes	3,855.38
Fred K. Crowe, Collector, Town of Riverside, account 1918 taxes	3,497.50
Arthur S. Hatch, Collector, Town of River Forest, account 1918 taxes	2,508.94
H. B. Kilgour, Collector, Town of Lyons, account 1918 taxes	2,415.34
William Havneu, Collector, Town of Worth, account 1918 taxes	2,304.55
Rudolph Lauer, Collector, Town of Northfield, account 1918 taxes	1,124.66
Albert H. Dunteman, Collector, Town of Leyden, account 1918 taxes	898.05
Frank Scharmer, Collector, Town of Stickney, account 1918 taxes	844.82
M. Schiessle, Collector, Town of Maine, account 1918 taxes	443.83
Herman Siemsen, Collector, Town of Bremen, account 1918 taxes	311.32
Total amount received from town collectors account 1918 levy.....	$ 93,061.34

Amount carried forward		$ 93,061.34
T. J. Forschner Contracting Company, in payment for their proportion of cost for removing conduits and supporting the cable aerially at two road intersections during the construction of the Calumet sewer		3,045.23
George M. Reynolds, Treasurer, account of interest coupons attached to 57 unsold Sanitary District four (4) per cent bonds of the District		1,140.00
United States Railroad Administration, for the account of the Atchison, Topeka & Santa Fe Railroad Company, in payment of semi-annual rental from January 1, 1919, to June 30, 1919, for water service at Corinth		1,050.00
United States Railroad Administration, for the account of the Atchison, Topeka & Santa Fe Railroad Company, in payment of rental for 1919 for pipe line at Willow Springs and Joliet		420.00
United States Crushed Stone Company, in payment of judgment note due April 2, 1919		333.33
Budlong Gardens, in payment of annual rental from June 1, 1919, to June 1, 1920, for water service at Oakton avenue, and from July 6, 1919, to July, 1920, for water service at Howard avenue		200.00
Village of Bellewood, in payment of court costs in Circuit Court of Cook County, Illinois		26.00
Chicago & Alton Railroad Company, being refund of excess freight charge		.99
The Commonwealth Edison Company, semi-annual rental to September 30, 1919, premises along the Main Channel, assignment of lease from Walter R. Kirk, December 1, 1916		929.00
City of Chicago, rental for January and February, 1919, premises along the Main Channel, sub-leased from Illinois Stone Company		250.00
Great Lakes Dredge & Dock Company, for account of the Western Quarries Company, for rental of land for one year, February 1, 1918, to March 1, 1919, under lease dated February 28, 1917		113.20
Van Fleet Shops, being rental for months of June and July, 1918, as per lease dated July 1, 1917		150.00
Sundry consumers for electric power and light	$ 54,654.42	
City of Chicago—		
For power and light for months of October, November, December, 1918 and January, 1919	$ 48,885.64	
Interest and depreciation for months of October, November and December, 1918	650.61	
		49,536.25
Treasurer of Cook County—		
For power and light for months of July, September, October, November, 1918, and January, 1919	$ 5,730.30	
Amounts carried forward	$104,190.67	$100,719.09

Amounts brought forward		$104,190.67	$100,719.09
Interest and depreciation for months of November, December, 1918, and January, 1919	75.00		
		5,805.30	
South Park Commissioners, for power and light for month of February, 1919		2,746.87	
Village of South Holland—			
For power and light for months of January and February, 1919	$ 1,348.48		
Interest and depreciation for January and February, 1919	65.07		
		1,413.55	
Commissioners of Lincoln Park—			
For power and light for February, 1919	$ 1,274.16		
Interest and depreciation for February, 1919.	69.45		
		1,343.61	
West Chicago Park Commissioners—			
For power and light for February, 1919	$ 1,154.15		
Interest and depreciation for February, 1919..	112.14		
		1,266.29	
Village of Melrose Park—			
Power and light for October, November, 1918, and January, 1919	$ 726.97		
Interest and depreciation for October, November, 1918, and January, 1919	178.38		
		905.35	
Village of Dolton—			
Power and light for February, 1919	$ 700.67		
Interest and depreciation for February, 1919..	18.65		
		719.32	
Village of Bellwood—			
In payment for judgment dated February 6, 1917	$ 1,304.65		
Interest from June 1, 1918, to April 8, 1919..	55.62		
		1,360.27	
Judgment dated February 14, 1919	$ 1,564.14		
Interest from February 14, to April 8, 1919....	11.53		
		1,575.67	
Village of Maywood—			
Power and light for March, 1919	$ 526.71		
Interest and depreciation for March, 1919....	44.65		
		571.36	
Town of Cicero, power and light for February, 1919		499.80	
Village of Summit—			
Power and light for February, 1919	$ 342.84		
Interest and depreciation for February, 1919..	32.98		
		375.82	
Amounts carried forward		$122,773.88	$100,719.09

Amounts brought forward		$122,773.88	$100,719.09
City of Blue Island—			
Power and light for February and March, 1919	$ 149.10		
Interest and depreciation for February and March, 1919	181.56		
		330.66	
State of Illinois, power and light for month of February, 1919		275.05	
Village of Bellwood—			
Power and light for January, February and March, 1919	$ 183.65		
Interest and depreciation for January, February and March, 1919	73.83		
		257.48	
Village of Evergreen Park—			
Power and light for March, 1919	$ 212.19		
Interest and depreciation for March, 1919	26.87		
		239.06	
Village of Wilmette, power and light for February, 1919		126.90	
Village of Lyons, power and light for February, 1919		64.88	
Public Schools, City of Blue Island, power and light for March, 1919		13.27	
Blue Island Library, power and light for March, 1919		3.79	
John B. Stevens, to cover cost of removal of installation		400.00	
Clifton Kelly Shows, deposits on account line construction and current		200.00	
Sundry Power Consumers, rental of meters for March, 1919		140.00	
Western Union Telegraph Company, to cover cost of transferring transmission at Lockport		53.89	
Kuhlman Transformer Company, to cover cost of delivering transformer to factory		47.62	
J. Westerberg, to apply against the account of $62.50 due the Sanitary District for over-payment of wages		32.00	
City of Chicago, to cover cost of large cable block		7.29	
Jas. J. Finneran, account personal telephone calls		3.00	
S. H. Reed, account personal telephone calls		2.25	
Sixten Jonason, to cover cost of two wooden poles		2.00	
R. W. Faupel, account personal telephone calls		1.50	
F. Wenzel, re-connecting service		1.00	
Mr. Stange, account personal telephone calls		.25	
Max Ebler, account personal telephone calls		.20	
			124,975.97
Grand Total			$225,695.06

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by attached

Respectfully submitted,

JOHN MCGILLEN,
Clerk.

CHICAGO, May 8, 1919.

$225,695.06.

Received from John McGillen, Clerk, the sum of Two Hundred and Twenty-five Thousand, Six Hundred and Ninety-five and Six One-hundredths ($225,695.06) Dollars, on the dates and in amounts as follows:

April 2	$ 5,366.21
April 3	4,941.93
April 4	13,220.66
April 7	49,829.48
April 8	758.67
April 9	499.80
April 10	19,373.19
April 11	11,446.08
April 12	8,682.78
April 14	20,750.77
April 15	33,281.13
April 16	1,940.35
April 17	11,239.82
April 18	7,790.00
April 19	7,416.66
April 21	7,422.98
April 22	3,767.24
April 23	1,235.28
April 24	719.84
April 24	2,304.55
April 25	274.29
April 26	6,421.03
April 26	1,140.00
April 28	660.70
April 29	81.19
April 30	4,221.12
April 30	909.31
Total	$225,695.06

To be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

Electrical Department (working capital)	$124,975.97
Collector, City of Evanston	27,612.17
Collector, Town of Cicero	18,087.55
Collector, Town of Oak Park	16,327.96
Collector, Town of New Trier	12,829.27
Collector, Town of Berwyn	3,855.38
Collector, Town of Riverside	3,497.50
Collector, Town of River Forest	2,508.94
Collector, Town of Lyons	2,415.34
Collector, Town of Worth	2,304.55
Collector, Town of Northfield	1,124.66
Collector, Town of Leyden	898.05
Collector, Town of Stickney	844.82
Collector, Town of Maine	443.83
Collector, Town of Bremen	311.32
T. J. Forschner Contracting Company	3,045.23
Water Service	1,670.00
Land Revenue	1,442.20
Interest and Premium on Bonds	1,140.00
Bills Receivable	333.33
Cost of Law Cases	26.00
Pumping Stations (Maintenance and Operation)	.99
Total	$225,695.06

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

REPORTS OF COMMITTEES.

Judiciary.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Judiciary reports that on January 31, 1918, the Board authorized the payment to Thomas P. Garland, on the voucher of the Chief Engineer, of the sum of $3,621.61, found to be due him under his contract with the Sanitary District dated October 13, 1916 (page 1360 of the Proceedings), for the construction of the Niles Center Sewer Outlet, and at that time withheld the sum of $300.00 to cover the cost of fully completing said work.

Your Committee further reports that on July 11, 1918 (page 694 of the Proceedings), the Board authorized the Chief Engineer to complete all unfinished work provided to be done under said contract at the cost of said contractor.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that it was necessary to expend the sum of $370.75 for completing said work, and that there is now due said contractor as a final payment under the terms of said contract the sum of $3,550.86.

Your Committee further reports that on December 13, 1918, the William E. Dee Company filed a bill of complaint in the Circuit Court of Cook County, General Number B42,637, against said Thomas P. Garland and the Sanitary District to enforce a lien against the money due said contractor from the Sanitary District for furnishing certain sewer pipe and sewer pipe material used in the construction of said sewer outlet, and thereafter various other persons intervened in said bill and filed claims to enforce liens which they claimed to have against the money in the hands of the Sanitary District; that said case was heard on April 30, 1919, and a decree was entered therein finding that the parties named in the following order were entitled to liens against the money due said contractor in the amounts stated. Under the decree of said court, the Sanitary District was ordered to pay said amounts to said persons, and it is now necessary to make said payments to comply with the terms of said decree.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw warrants in favor of the following named persons in the amounts stated as follows:

Thomas Lynch	$ 16.00
Morton S. Cressy, assignee of Alfonso Notardonato and others	400.00
Wm. E. Dee Company	1,885.98
Wm. E. Dee Company, assignee of the Harvey Motor Truck Company	9.72
American Sewer & Drain Construction Company	181.12
Max Gerlach	456.64
United States Fidelity & Guaranty Company	379.20
W. J. Springer and Clara Blameuser, doing business as Niles Center Coal & Building Material Company	32.74
August Ruhnke	123.58
M. Foley Company	65.16

in full satisfaction of the terms of said decree.

Respectfully submitted,

WM. J. HEALY,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has examined and approved the bond of the Coffin Valve Company with the Massachusetts Bonding and Insurance Company thereon as surety, on its contract for furnishing and delivering miscellaneous sluice gates with floor stands and appurtenances for the Desplaines River Sewage Treatment Works, designated as Division "V" of the specifications, for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Coffin Valve Company for the faithful performance of the contract above specified, said bond being in the penal sum of $3,125.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the form of the contract of the Coffin Valve Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this 1st day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Coffin Valve Company, a corporation organized under the laws of the State of Maine, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering the Sluice Gates, and the apparatus, equipment and appurtenances thereto, as called for under Division V, of the attached specifications, complete, as specified, freight prepaid, or board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed and attached hereto. The speci-

fications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division V, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the sluice gates, and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, on order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

General Specifications.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing, delivering and erecting at the site of the Des Plaines River Sewage Treatment Works and in furnish-

ing and delivering f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., the following:

Division V, sluice gates, including miscellaneous sluice gates, with floor stands and appurtenances.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION V.

SLUICE GATES.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division V of this contract will be furnished by the contractor for Division A. These foundations will be brought up to

within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Shop Tests.

(8) All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments and shall make the tests, and shall provide all facilities for the Engineer to inspect the work previous, during or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense, make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all the necessary equipment and facilities and shall make the tests as outlined herein.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division V), shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS.

DIVISION V, SLUICE GATES.

General.

(V1) The Contractor shall furnish the sluice gates of a make approved by the Engineer, as shown on the plans, together with the wall castings, guides, extension shafts, floor stands, gearing, anchor bolts and other appurtenances, complete, as specified. The sluice gates shall all be made by one manufacturer. These gates are designed to operate in sewage and drainage water containing trash, and shall be of the highest grade in design, workmanship and material, conforming to the best standard practice.

All sluice gates shall have a clear waterway of the proper dimensions for the clear waterway openings shown on the plans or specified herein. The sluice gates shall be of ample strength to withstand on either side of the gate the hydrostatic head of water specified, and shall be tight against this head when the pressure is applied to either side of the gate. All operating mechanisms shall be so designed that the gates may be easily opened or closed by one man by hand against the specified head.

Schedule of Sluice Gates.

(V2) In the schedule below are given brief data as to the type and means of operating the sluice gates. Requirements not included therein are specified elsewhere. The distances given from center of gate to base of operating stand are approximate.

(The table referred to is at top of page 480).

Under column headed "head on center of gate," * denotes that normal method of use and operation will be with head on the back of the gate.

In the foregoing table, under the column "How Operated," "Nut" means the extension stem is non-rising and furnished in a square nut for key operation; "Stand" means that the extension stem is rising and that an operating stand is to be furnished as specified in Section V9; under the column "Connection," "Spigot" means a spigot end on the sluice gate frame extending into the wall, with the inside of the bore or tube flush with the face of the waterway; "flanged"

CIRCULAR SLUICE GATES.

Number of Grates Required	Size in Inches	Head on Center of Gate Feet	How Operated	Connection	Center of Gate to Base of Operating Stand Ft. In.
1	6	5	Nut	Spigot	4-6
2	6	9	Nut	Spigot	9-6
1	8	5	Nut	Flanged	6-0
6	8	5 *	Stand	Flanged	3-0
6	8	12 *	Stand	Flanged	15-0
3	10	9	Nut	Flanged	16-9
3	10	12	Nut	Flanged	19-4
1	10	13	Nut	Flanged	21-0
1	10	13	Nut	Flanged	14-0
1	10	17	Nut	Flanged	24-4
1	12	9	Nut	Flanged	17-0
3	12	7	Nut	Flanged	15-6
2	16	5 *	Nut	Flanged	13-0
1	18	21	Nut	Spigot	22-6
1	66	23 *	Stand	Spigot	27-0

RECTANGULAR SLUICE GATES.

Note: Vertical Dimension is Given First.

1	18x18	5	Stand	Spigot	6-3
1	18x18	5 *	Stand	Spigot	6-3
3	18x36	12 *	Stand	Spigot	10-0
2	24x24	5	Stand	Spigot	5-0
2	24x24	5	Stand	Spigot	6-0

means an extension end, flanged, faced and drilled to American standard, to bolt the flange on the end of a pipe. Where a nut is called for, the dimension "center of gate to base of operating stand" shall be understood to mean "center of gate to elevation of operating floor."

Materials and Castings.

(V3) All materials shall be of the quality and character best adapted for the purpose for which it is to be used. No material shall be used for any purpose for which it has not previously been in use for a like purpose for a sufficient length of time to demonstrate its probable success for the purpose for which it is to be used.

All castings shall be smooth and sound, free from all defects of any description.

Bronze Mountings.

(V4) The sluice gate, lifting shaft guides and operating stand shall be bronze-mounted throughout; that is all bearing or wearing parts shall be either of solid bronze or faced with bronze unless otherwise specified.

Frames.

(V5) The frames of the gates shall be built of cast iron, of the pattern specified or shown on the plans. Where flanged ends are called for, they shall be faced and drilled. The side guides shall consist of heavy castings of approved section. The flanges of the frames shall be provided with bronze seats in order to provide non-corrosive faces upon which the corresponding faces of the valves shall slide, and when in close contact, shall furnish a water-tight closure.

Gates.

(V6) The gates shall consist of cast iron plates, stiffened with heavy ribs both vertically and horizontally, suitably spaced, and with sufficient depth to stand the specified water pressure without twisting or springing. The face of the gate castings shall be provided with bronze faces as hereinafter described.

Facings.

(V7) Both gates and frames shall be provided with bronze, non-corrosive facings which shall be dove-

tailed into the iron castings. The dove-tail grooves in the cast iron, and the sides of the bronze strips shall be carefully peened until every crevice in the dove-tail is well filled, after which the facings shall be additionally fastened by countersunk head brass screws, and the facing surface finally machined and hand scraped to a water-tight bearing.

Wedges.

(V8) The sluice gates 10 inch and under in size, shall be fitted with fixed wedges, with ample bearing. The sluice gates 12 inches and over in size shall be fitted with the proper number of adjustable wedges or other devices, properly distributed, in order to force them tightly to the seat at the point of closure. No wedges which tend to retain trash will be accepted. The side wedges must be capable of taking the entire pressure. The gates shall be provided with final stops to prevent further travel after the ports are covered. Both the faces of the wedges and the bearing spots therefor shall be of bronze. The guides and those portions of the valves which make the sliding contact shall be planed smooth. The gates shall operate without sticking, binding or chattering.

Shafts and Operating Stands.

(V9) The lifting shafts connecting the sluice gates with the operating stands shall be of the best cold rolled steel, except the upper ends which are to be threaded, shall be of high grade rolled bronze. The lifting shaft shall be of sufficient length to extend up above the operating stand, when the gate is fully closed, a distance of one (1) inch, the exposed end of the shaft to be neatly finished.

The extension stems of the sluice gates shall be provided with adjustable cast iron guides designed for securely bolting to the wall for guiding and steadying the shaft, where shown on the plans or required. Each guide shall be furnished with a bronze bushing for the stem to pass through. No lifting shaft shall be unsupported for a length greater than ten (10) feet.

Where nuts are specified, the head of the shaft shall be finished by forming into a square nut. Four (4) key wrenches shall be furnished for operating these gates.

For the sluice gates under 24 inch in size, where operating stands are specified, a neat wheel stand shall be furnished, in which the stem passes through the wheel hub and serves as an indicator. For the 24 inch sluice gates, wheel stands equipped with roller bearings running in grease shall be supplied. For the 66-inch sluice gate a two speed bevel gear stand shall be provided, the gears and stem being cased in a moisture proof cover, securely fastened on. A neat indicator shall be furnished.

Painting and Protection.

(V10) All finished parts shall be well protected in the shop and during transportation to prevent injury and abrasion. All castings not finished shall be thoroughly cleaned and painted before rusting begins and before leaving the shop with two (2) coats of high grade asphaltum varnish or other coating. All bronze tool-finished work shall be left bright.

Anchor Bolts.

(V11) The Contractor shall furnish all the bolts required for securing and supporting the sluice gates, extension stems, guides and operating stands.

Tests.

(V12) The sluice gates, when erected, will be tested by the Sanitary District, as the Chief Engineer may require, to demonstrate compliance with contract requirements. Any part or parts failing to comply with such requirements or showing undue strain or weakness, shall be corrected or removed by the Contractor, at his expense, until such requirements are met.

Transportation and Delivery.

(V13) The sluice gates and appurtenances furnished hereunder shall be delivered by the Contractor at his own risk, f. o. b. cars, on the Chicago and Northwestern Railway, Maywood, Ill., consigned to the contractor designated by the Chief Engineer.

Guarantee.

(V14) All equipment furnished hereunder shall be guaranteed free from mechanical defects in workmanship, design and materials, and the Contractor shall replace, without cost to the Sanitary District, any part or

parts proving defective within one (1) year after the equipment has been placed in operation, in accordance with the maintenance bond for this purpose specified under article 34.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the

opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed hereinbefore and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any pro-

gress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by, or in consequence of any negligence in guarding the same; or by or, on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912;" approved June 28, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any

accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in, or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees

of said Sanitary District of the bond of said Contractor.

The Contractor for Division V hereby agrees to deliver the sluice gates and appurtenances to the railroad within one hundred and eighty (180) calendar days from the said date of the approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago and North-Western Railway, Maywood, Illinois.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division V, within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Ten Dollars ($10.00) for Division V, for each and every day that said Contractor shall be in default in the completion of said work ready for operation, provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any

part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Division V.

Art. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable such quantity or quantities of material, machinery or equipment as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor, or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 34. Division V. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any

parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Article 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and spcifications and the requirements of the Engineer under them, to-wit:

DIVISION V.

SLUICE GATES.

For furnishing and delivery, complete, of the sluice gates with extension shafts, operating stands, and miscellaneous appurtenances, complete as specified, f. o. b. cars, the Chicago and North Western Railway, Maywood, Ill., the lump sum of six thousand two hundred fifty dollars ($6,250.00).

The Contractor guarantees that the sluice gates to be furnished under this contract will work satisfactorily under all the conditions proposed without any undue strain, wear or vibration. The Contractor guarantees the workmanship and the strength and quality of all materials entering into their construction, agreeing to make good at his own expense all damages caused by defects in the same during the maintenance period of one year after acceptance of said sluice gates.

The Contractor further agrees that in the event that the sluice gates or any part thereof shall fail to conform to the requirements of the specifications in any particular, the Sanitary District shall have the option of rejecting said sluice gates or of accepting the same at such reduced price, as will in its judgment fully compensate for such failure to meet the guarantees.

If the Sanitary District shall elect to reject any part or all of the sluice gates which fall below the guarantees, the Contractor agrees that they shall remain in place and be operated by the Sanitary District until other apparatus which does comply with the guarantees is furnished.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 36. Division V. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for

the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its Treasurer to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Finance Committee.
Attest:
John McGillen,
Clerk.
(Seal)

Coffin Valve Company. (Seal)
By William J. Carlin,
Treasurer.
Attest:
James E. McCafferty,
Secretary.

Approved May 7, 1919:
H. I. Steffa,
Mechanical Engineer.
Langdon Pearse,
Sanitary Engineer.
G. M. Wisner,
Chief Engineer.
Charles E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Coffin Valve Company, as principal and Massachusetts Bonding and Insurance Company, as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of thirty-one hundred

twenty-five dollars and no cents ($3,125.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 1st day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden Coffin Valve Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 1st day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing, and delivering miscellaneous sluice gates with floor stands and appurtenances, f. o. b. cars the Chicago and North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division V, of the attached contract.

Now, If the said Coffin Valve Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Coffin Valve Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Coffin Valve Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Coffin Valve Company or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Coffin Valve Company shall be conclusive against each and all parties to

this obligation, as to amount, liability and all other things pertaining thereto.

COFFIN VALVE COMPANY. (Seal)
By WILLIAM J. CARLIN,
Treasurer.

Attest:
JAMES E. McCAFFERTY,
Secretary.

MASSACHUSETTS BONDING & INSURANCE COMPANY. (Seal)
By C. G. FITZGERALD,
Vice-President.

Attest:
GEO. W. BERRY,
Assistant Secretary.

Approved as to Form May 7, A. D. 1919:
Attorney.
C. ARCH WILLIAMS,
Assistant Attorney.
CHAS. E. ANTHONY,

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has examined and approved the bond of Eugene E. Maher with the Southern Surety Company thereon as surety, on his contract for furnishing and delivering the pumping machinery for the Desplaines River Sewage Treatment Works, designated as Division "O" of the specifications, for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of Eugene E. Maher, for the faithful performance of the contract above specified, said bond being in the penal sum of $4,525.00, be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the form of the contract and bond of Eugene E. Maher:

THE SANITARY DISTRICT OF CHICAGO. CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this 1st day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated The Sanitary District, and Eugene E. Maher, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree, with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, and that are necessary for furnishing and delivering the pumping machinery and the apparatus, equipment and appurtenances thereto, as called for

under Division O of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division O of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the pumps and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by The Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing and delivering f. o. b. cars, the C. and N. W. Ry., Maywood, Ill.,

the following: Division O, pumping machinery, including three (3) 14-inch centrifugal pumps and two (2) circulating pumps and miscellaneous appurtenances.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Provisions for Handling Equipment at Site.

(3) The Sanitary District will reserve a right-of-way to the station site, from First avenue on the west. A hand crane will be installed under Division A and will be available for handling the equipment to be installed in the pump and blower room. The Contractor shall operate this, however, at his own expense, and shall properly oil and maintain it during his use thereof.

The Contractor under Division A shall, at his own expense, provide any temporary blocking, supports or other protection for the pump and blower room floor necessary to prevent injury to the same, and shall make good at his own expense any damages done by him to the station structure or its appurtenances or to the equipment handled in unloading from the cars, hauling, unloading, and installing any of the equipment included under this contract for erection under Division A, or in removing plant or other property or in cleaning up.

It is expected that the superstructure of the station will be sufficiently advanced at the time of installation to afford protection from storms to the equipment included under this contract after the same is within the superstructure walls. The Contractor under Division A shall, however, furnish such protection as may be necessary against temperature, dust, dirt, and humidity, and shall be fully responsible for the protection of such equipment until its final acceptance.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of The Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by The Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION O.

Circulating Pumps.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as The Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may

be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by the examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division O, of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Foundation Bolts.

(7) The foundation bolts for the pumps, electrical machinery, blowers, and other equipment furnished by the Sanitary District will be furnished by the Sanitary District and placed by the Contractor under Division A, in accordance with substantial templates constructed by him to dimensions furnished by the contractor for the equipment to be set. Previous to setting any piece of equipment on its foundation the Contractor shall satisfy himself that these bolts are properly placed and shall make no claim against the Sanitary District for any expense incurred in resetting of the equipment due to any error in the bolt setting. Should any such error be discovered, the same will be corrected by the Sanitary District, unless the error be due to incorrect dimensions furnished by the contractor for the equipment furnished, in which case expense of making such corrections shall be paid by said contractor furnishing the equipment.

Shop Tests.

(8) Each pump shall be tested in the shop to such an extent as may be necessary to determine the balance of the moving parts and the character of the workmanship.

Each motor shall be tested in the shop for efficiency, insulation and operating characteristics, except as hereinafter specified.

All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments and shall make the tests, and shall provide all facilities for the Engineer to inspect the work previous, during or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense, make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all necessary equipment and facilities and shall make the tests as outlined herein.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division O,) shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date

when the Board of Trustees of the Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS

Division O, Pumping Machinery.

General Description.

(O1) The work to be done under Division O of this contract includes the furnishing and delivering of all the pumping machinery and appurtenances, complete, as shown on the plans or specified herein. The equipment called for includes three (3) 14-inch centrifugal pumps, flexible bearings, steady bearings, shafting, bearing bracing, and miscellaneous appurtenances, complete. All this material will be erected in the Des Plaines River Sewage Treatment Works by the Sanitary District under another division.

The Contractor shall also furnish and deliver, complete, ready to run, two (2) circulating pump units, each consisting of pump and motor direct connected, mounted on a neat cast iron base, as specified herein.

The workmanship and finish of all parts and of the machinery as a whole shall be of the best grade, in every respect satisfactory to the Chief Engineer.

The contract is intended to cover complete pumping machinery and equipment, ready for erection, including all anchor bolts and gaskets. The Contractor shall furnish all bolts, pins or other small parts necessary for the successful operation of the pumping machinery and equipment specified herein, even though these details are not shown on the plans.

Machine Work.

(O2) The work to be done under this contract (Division O) must be in exact accordance with the detail plans. No variation from the same will be permitted except with the written consent of and by the written order of the Chief Engineer in each case.

The plans show the amount of material and machine work required to construct the apparatus as specified. Minor changes in these plans shall be made at any time, as may be ordered in writing by the Chief Engineer, until the work has been completed on any piece. The Contractor shall make no claim for compensation for any changes which do not require additional labor or material.

For changes which do not require any additional machine work but do require additional material, when ordered in writing by the Chief Engineer, the Contractor will be paid the following unit prices per pound, as specified, for all additional material furnished when ordered:

For cast iron, ten (10) cents per pound.
For steel, twenty (20) cents per pound.
For bronze, fifty (50) cents per pound.

The Contractor shall make no claim for additional compensation for any changes so ordered.

All water passages and curves must conform exactly to the plans, after casting and machining. The Contractor shall make the necessary allowances for shrinkage and warping, or furnish new parts, if required by the Chief Engineer.

Replacements.

(O3) The Contractor shall make the individual pieces of the machinery herein specified to conform to the exact dimensions shown on the plans, so that no fitting or adjusting will be necessary in setting up the entire machine, other than such as is usually done in high grade standard designed apparatus. This requirement will be rigidly enforced, as it is essential that any defective pieces of the machinery may be easily replaced by a new piece made in accordance with the plans.

Inspection.

(O4) The Chief Engineer may, at his discretion, have an Engineer present during the construction of every piece. The Contractor shall afford every facility to check up the compliance with the specifications. Unless instructions are given to the contrary in writing by the Chief Engineer, any work done during the absence of the Engineer will not be accepted. It is distinctly understood that the inspection at the shop or during erection is simply a precaution taken by the Sanitary District to insure compliance with these specifications, and does not in any way affect the right of rejection of any part or parts by the Chief Engineer, if, in his opinion, the same does not comply with these specifications, even though such part was previously examined by the Engineer. It is further understood that the inspection at the shop or during erection does not relieve the Contractor of full responsibility for the dimensions of any part. Any variation from the plans will be cause for rejection of the part in which the variation is found at any time up to the final release

of the Contractor from his obligations under this contract.

Templates.

(O5) The drilling of all flanges shall be spaced uniformly and symmetrically so that flanges will fit at any angle.

MATERIALS

General.

(O6) The material in every piece shall be the highest grade of its kind, homogeneous, and free from all flaws which could possibly affect its strength or appearance. Test bars or pieces shall be made as often as required by the Engineer. Material which does not comply with the requirements shall be rejected. Broken test pieces shall be the property of the Sanitary District. The Contractor shall receive the following unit prices per pound for all test pieces ordered by the Engineer:

For wrought iron and steel, thirty (30) cents per pound finished.

For all composition or bearing metal, sixty (60) cents per pound finished.

For all cast iron, eight (8) cents per pound.

The cast iron, cast steel, steel shafts and forgings, wrought iron, rivets, bolts, copper, and bronzes shall conform in composition, physical characteristics and method of treatment to the latest standard specifications of the American Society of Testing Materials, except in so far as the specifications herein given may modify the same.

Any materials for which no detailed specification is given herein shall be of the quality and character best adapted for the purpose for which it is to be used. No material shall be used for any purpose for which it has not previously been in use for a like purpose for a sufficient length of time to demonstrate its probable success for the purpose for which it is to be used.

Castings.

(O7) Castings shall be smooth and sound, free from blow holes, flaws lumps, cracks, scabs, shrinkage strains, cold shuts and any other defects of any description. Castings shall be made as nearly as practicable of uniform thickness throughout, where not detailed on plans. Cores shall be carefully centered. If the cores shift, the piece may be rejected. No plugging or stopping of holes or defects of castings by welding or other method will be allowed, except by the written permission of the Chief Engineer. They shall be of true form and dimensions and made in accordance with the best modern foundry practice. Castings above five hundred (500) pounds in weight shall be moulded in dry sand or loam.

All castings forming the water passages shall be perfectly smooth and true, without lumps, hollows or spongy places. No filler or paint will be allowed except when directed by the Chief Engineer. The surfaces exposed to the water must show a smooth, close-grained structure.

Cast Iron.

(O8) Cast iron shall be tough, fine-grained and uniform in character, suitable for the uses to which it will be put and for machining where required. Test pieces twenty-six (26) inches long by two (2) inches wide and one (1) inch deep, cast from the same melt as the castings which they represent, when placed flatwise on supports twenty-four (24) inches apart and loaded in the center, shall sustain a load of not less than two thousand (2,000) pounds, with a deflection of not less than 0.35 inch.

Shafts.

(O9) The shafts of the centrifugal pumps shall be of the highest grade open hearth steel, forged and hammered, carefully annealed and without welds. They shall be free from cracks or flaws, either before or after finishing, and shall be of ample length before finishing, to assure sound ends. Each shaft shall have a full sized prolongation on one end, from which the test piece shall be cut, parallel to the axis of the forging. The test piece shall receive the same treatment as the forging. The test pieces shall be cut half-way between the outside and the center of the forging. All tests shall be made after annealing. The tensile strength shall be not less than sixty-five thousand (65,000) pounds per square inch. The elongation shall be not less than twenty-five per cent in two (2) inches.

Steel Forgings.

(O10) All steel forgings, other than shafts, shall be of the best open hearth steel, carefully annealed and without welds. They shall be free from cracks and flaws. Test pieces shall be cut from a properly forged prolongation, after annealing. The tensile strength shall be not less than sixty thousand (60,000) pounds per square inch. The elongation

shall be not less than twenty-five (25) per cent in two (2) inches.

Wrought Iron.

(O11) All wrought iron shall be ductile, tough, fibrous and uniform in character and shall have an ultimate tensile strength of not less than forty-five thousand (45,000) pounds per square inch, with an elongation of twenty (20) per cent in eight (8) inches.

Bolts.

(O12) Bolts and studs shall be of open hearth steel. The Engineer may select at random a number of bolts and nuts from each lot of each size, and have them broken in a testing machine. If any two (2) bolts so selected shall have an ultimate tensile strength lower than forty-six thousand (46,000) pounds per square inch of effective area at the bottom of the the thread, the whole lot of that size may be rejected. The threads shall be cut from new dies to the United States Standard thread. Bolt heads and nuts shall be hexagonal unless otherwise ordered and shall be of the United States Standard sizes. The nuts shall be of the best quality cold-pressed. Bolt heads and nuts shall be machined on the bearing surfaces with chamfered edges square with the axis of the bolt. Bolts shall be made of the exact length required and shall not project more than one-quarter (1-4) inch beyond the nut when tight. When bolts are shown on the plans which cannot be inserted, the Contractor shall furnish stud bolts or double-threaded bolts, as may be required. All bolt heads and nuts on moving or finished parts or plainly showing, shall be neatly finished. When frequent removal and adjustment is necessary, the nuts shall be case hardened.

No tightening of bolts with hammer and chisel will be be permitted.

Brass.

(O13) All brass shall be of the highest grade of red brass, with an ultimate tensile strength of not less than twenty-two thousand (22,000) pounds per square inch. It shall be homogeneous and uniform in character. New metal only shall be used.

Phosphor Bronze.

(O14) All bronze or phosphor bronze shall be of the highest grade, homogeneous and uniform in character, of composition satisfactory to the Engineer, and shall have an ultimate tensile strength of not less than thirty thousand (30,000) pounds per square inch, with an elongation of fifteen (15) per cent in two inches.

Rolled Bronze.

(O15) All rolled bronze must be homogeneous and uniform in character, properly annealed, of composition satisfactory to the Engineer, and shall have a tensile strength of not less than fifty thousand (50,000) pounds per square inch and an elongation of twenty (20) per cent in two (2) inches.

Finished bolts and nuts of rolled or phosphor bronze may be selected by the Engineer at random and tested, and if any two (2) fail to conform with the specified requirements, the whole lot may be rejected.

Babbitt Metal.

(O16) All babbitt metal shall be made of high grade ingredients of quality satisfactory to the Engineer, mixed in the proportions shown in the plans and specified herein. It shall be well peened in place before cooling. The metal must be free from blow holes. No filling or burning in of metal to stop blow holes will be allowed, but the whole bearing shall be repoured. Babbitt in bearings in contact with shafts of centrifugal pumps shall be composed of the following parts by weight—tin, eighty-six (86), copper, four (4), and antimony, ten (10).

Copper.

(O17) All copper used shall be of the best copper obtainable, thoroughly annealed and ductile.

Gaskets and Packing.

(O18) All gaskets shall be of the best quality rubber packing, not less than one-eighth (⅛) inch thick, with canvas insertions, of a manufacture, thickness and grade satisfactory to the Engineer. Where noted on the plans, a special thickness shall be furnished or a special quality, as Rainbow or equal.

Joints.

(O19) Joints specified as red lead shall be made of a mixture of the best grade of red lead ground dry, white lead, and linseed oil, of the best quality, thoroughly mixed to the consistency of a heavy paint, in proportions approved by the Engineer. This shall be mixed only as required for the work.

Drilling.

(O20) All drilling shall be fair and square with faces. All bolt holes shall be spot faced, square with the axis of the holes, and the size of the outside diameter of the nuts.

Eye Bolts.

(O21) The Contractor shall drill and tap all heavy pieces for the insertion of eye bolts. He shall furnish all necessary eye bolts. These shall be drop forgings of liberal dimensions to handle the pieces. Additional eye bolts may be ordered by the Engineer when not shown on the drawings, to facilitate erection or dismantling.

Dowel Pins.

(O22) All parts requiring alignment shall be secured with, at least, two steel dowel pins. These shall be tapered, and as far as practicable interchangeable and standard. The pins shall have square ends and be threaded and provided with nuts to allow of removal.

Liners.

(O23) Where liners are specified. these shall be of steel, cut from one piece and shall be of different thicknesses down to No. 28 Birmingham gauge, as required.

Machine Work.

(O24) All surfaces worked with machine tools must be made true and smooth and must accurately conform to the plans in shape, size and alignment. All bearing surfaces of sole and bed plates shall be perfectly smooth and true and done in one setting of the piece.

Boring.

(O25) Boring shall be done in a vertical position to assure truly cylindrical work. The support of the tools shall be of ample stiffness to prevent any chattering.

Centers.

(O26) All shafts and turned rods shall be worked on lathe centers, of ample size. The centers, shall be carefully preserved. Rigid steady rests shall be used on long pieces to assure true work. All corners must be rounded with proper fillets, where the diameter changes. Neglect of this precaution shall be sufficient cause for the rejection of the shafts or rods.

True.

(O27) After erection, the shaft and runners must run perfectly true. If the shaft or impellers should be sprung in any way they may be rejected, or the Chief Engineer, at his discretion, may require the revolving parts to be re-turned in place, at the expense of the Contractor.

Journals.

(O28) All journals shall be turned straight, cylindrical and smooth, and shall then be scraped to a red-lead bearing on the shafts in order to make the same an extraordinarily good bearing surface and accurate fit. Oil ways must be cut exactly in accordance with directions and scraped on the entering edge as directed.

Examination of Parts.

(O29) All journal boxes, pins, keys and other details of the machinery, shall be taken apart at any time during the process of fitting, when the Engineer may so direct, to allow a thorough examination of the fit and workmanship.

Keys.

(O30) All keys must be accurately fitted to the sides of the keyways and made with an appropriate taper. They shall be driven in the presence of the Engineer.

Taper Fits.

(O31) Taper fits shall be accurately made to insure a uniform bearing throughout their length.

Force Fits.

(O32) Where shown on the plans or specified, force fits shall be made. This shall preferably be done with a hydraulic press, to the pressures given, but if done with bolts and nuts, the force required shall be determined by the Engineer, who shall make what allowances he deems necessary for friction. The pressure required to take these fits home must be within ten (10) per cent of that specified.

No Bushing.

(O33) No bushing of fits to correct shop mistakes will be allowed under any condition.

Patterns.

(O34) All patterns required for any and all parts of the pumps shall be the property of the Sanitary District, including all special devices for making sweep castings, core boxes, and any and all similar material. The patterns shall be made of thoroughly seasoned material, carefully fastened together and braced

to prevent warping. Immediately after being used in the foundry, each pattern or core box shall be cleaned, shellacced and marked with the name "Sanitary District of Chicago," and the part for which it is to be used. It shall then be carefully crated, stored, and delivered to the Sanitary District at any place it shall designate in the City of Chicago when and as ordered by the Chief Engineer at any time prior to the final payment under this contract. All patterns damaged in use or shipment shall be be carefully repaired.

Couplings

(O35) The couplings shown on the plans shall be promptly furnished by the Contractor. The pump end shall be forced on by the Contractor. The Contractor shall finish and rough bore the motor end of all couplings and deliver them f. o. b. cars at a point in the United States to be designated by the Chief Engineer.

Guages.

(O36) On all bearings, brass-mounted oil guages of a design satisfactory to the Engineer, shall be furnished to show the level of the oil in each bearing.

Wrenches and Tools.

(O37) The Contractor shall furnish a full set of wrenches to fit every bolt head and nut. All sizes up to 2-inch opening, including wrenches for nut and cap bolts, shall be case hardened, finished, and polished. They shall be mounted on oak boards, carefully laid out, finished and varnished. Large wrenches, spanners, socket wrenches, etc., shall be furnished in neat heavy wooden boxes, iron bound and painted in approved colors. Socket wrenches shall be machined or drop forged and not hand forged.

The Contractor shall furnish all necessary eye-bolts, hooks and rods required in handling various parts of the pumping units and appurtenances. All hooks and eye-bolts forming a part of the permanent equipment shall be made of steel, smoothed and polished.

Name Plates.

(O38) The Contractor shall furnish for each pump a polished, bronze name plate, the lettering and design for which will be furnished by the Engineer of the Sanitary District. The name of the Contractor will be put on this plate as builder but his name shall not be cast on any other part of the pumps.

Oil Reservoirs.

(O39) All oil reservoirs shall be thoroughly cleaned of foundry refuse. They shall be perfectly tight. Any reservoir which shows leakage will be rejected and shall be promptly replaced by new tight reservoirs by the Contractor at his expense.

Shop Erection.

(O40) The principal parts shall be erected by the Contractor in his shop to assure their fit and alignment, and to facilitate rapid final erection. The joints in all water passages of the pumps should be chipped off. In general all chipping which the Engineer may consider necessary shall be done by the Contractor at his own expense.

Sag of Shafts and Final Alignment.

(O41) Proper allowance shall be made in all machine work for the sag of the shafts.

Circulating Pumps.

(O42) The Contractor shall furnish two, two (2) inch centrifugal pumps, directly connected to slow speed squirrel cage induction motor to operate on alternating current at 440 volts, 3 phase, 60 cycles. Each pump shall have a capacity of at least one hundred (100) gallons per minute. One pump shall be designed to operate against a maximum total head of thirty (30) feet and the other against a maximum total head of forty (40) feet.

The pumps shall be of the split case type, with bronze impellers and shaft sleeves, self-oiling bearings, carried outside of and separate from the stuffing boxes. The design, material and workmanship shall be of the highest grade throughout. The pumps shall be designed for continuous 24 hours service.

Transportation and Protection.

(O43) The Contractor shall deliver at his own risk and expense all parts of the machinery f. o. b. cars, on the Chicago and Northwestern Railway, Maywood, Illinois. All material must be consigned to the contractor designated by the Chief Engineer and not to the Sanitary District, except as specified for patterns under Section O34.

All finished parts and bearings must be well protected in the shops and during transportation to prevent injury and abrasion. Special care shall be taken to crate rigidly all shafts or other parts liable to be sprung. The Contractor shall be responsible for the trueness of the

shafts until the erected work is finally accepted. All injured parts must be replaced, when in the opinion of the Engineer, refitting will not suffice, if said injury is due to damage in transit or prior to delivery.

Tests.

(O44) After the completion of the various parts of the pumping machinery and appurtenances, the Contractor shall make, at his own expense, all tests necessary to demonstrate the tightness and strength of the work, and any other additional tests ordered by the Chief Engineer to demonstrate compliance with the contract requirements. Any part or parts designed by the Sanitary District showing undue weakness due to defective material or workmanship shall be corrected or removed by the Contractor. Any part or parts designed by the Contractor showing undue weakness from any cause whatsoever shall be corrected or removed by the Contractor.

Painting.

(O45) Before leaving the shops, the metal work included in various parts of the equipment, where made of iron or corrosive material, except where the nature of the service makes it impracticable, shall be thoroughly cleansed of rust and loose scale on all surfaces. No paint shall be applied until the castings have been inspected by the Engineer and approved. They shall then be painted with thin paint without filler, unless otherwise specified, to protect the parts from rust during transportation.

All bright surfaces on steel, wrought iron or cast steel work shall be amply protected in shipment with a heavy coat of white lead and tallow.

Operation and Maintainance.

(O46) It is anticipated, but not guaranteed, that construction of the incoming sewer and other construction work to be carried on under other contracts coincident with this will be sufficiently advanced to allow the operation of the station upon the completion of the installation of the equipment included under this contract. In any case, as soon as conditions will permit, the Sanitary District will place the equipment in operation to such an extent as it may deem necessary, and will continue to operate the same for at least sixty (60) calendar days. During the operative period the Contractor shall promptly supply all materials or parts, betterments or replacements in the equipment included in this contract as may be required to make the same comply with the specifications and plans or to replace any defective material. The actual making of any changes, betterments or replacements on the pumps, when installed, on the work, will, however, be done by the Sanitary District, and the expense thereof charged to the Contractor.

Transportation and Delivery

(O47) The pumping machinery furnished hereunder shall be delivered by the Contractor at his own risk, f. o. b. cars, on the Chicago & Northwestern Railway, Maywood, Illinois, consigned to the contractor designated by the Chief Engineer.

Superintendence During Erection.

(O48) The Contractor shall furnish, at his own expense, a competent erecting engineer who shall be on the work during the erection and the operating tests for a total of thirty (30) working days, on such days as the Engineer shall designate. He shall see that the work is properly erected and shall be responsible for the correct alignment. Any additional time required and ordered by the Chief Engineer will be paid for as specified for extra work under Article 8.

Guarantee.

(O49) All equipment furnished hereunder shall be guaranteed free from mechanical defects in workmanship, design and materials, and the Contractor shall replace without cost to the Sanitary District any part or parts proving defective within one (1) year after the equipment has been placed in operation, in accordance with the maintenance bond for this purpose specified under Article 34.

GENERAL CONDITIONS

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifi-

cations, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work per-

formed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

Under Division O, the fabrication of material will be inspected at the shop or shops where fabricated. The Engineer shall have full access at all times to all parts of the shop where material under his inspection is being manufactured. If ordered by the Chief Engineer, the Engineer, shall stamp each piece accepted with a private mark and any piece not so marked may be rejected at any time and at any stage of the work. If the Engineer, through an oversight or otherwise, has accepted material or work which is contrary to the specifications, this material may be rejected, regardless of the stage of completion.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. & N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of de-

signs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912," approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the

same, and in event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any subcontractor for any claim or damages whatsoever. In case any party or parties to whom any work under this contract shall have been sublet shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the sub-letting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division O hereby agrees to deliver the pumps and appurtenances to the railroad within two hundred and seventy (270) calendar days from the said date of approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago & North-Western Railway, Maywood, Illinois.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division O within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Ten Dollars

($10.00) for Division O for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States Government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any

damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

FORFEITURE OF CONTRACT.

Division O.

Art. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, machinery or equipment as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Divisions O. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Article 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION O—PUMPING MACHINERY.

For furnishing and delivery, complete, of the three (3) fourteen (14) inch centrifugal pumps and auxiliary machinery, complete, as specified, f. o. b. cars, the Chicago and North Western Railway, Maywood, Ill., the lump sum of nine thousand fifty dollars ($9,050.00).

The pumps will be manufactured in the shops of the Dayton-Dowd Company at Quincy, Illinois.

The foregoing price shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder; and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimate.

Art. 36. Division O. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

IN WITNESS WHEREOF, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed,

and the party of the second part has hereunto set his hand and seal.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Finance Committee.

Attest:
JOHN MCGILLEN,
Clerk.

(Seal)

EUGENE E. MAHER (Seal)
By C. B. ADAMS,
Attorney-in-Fact.

Approved May 1, 1919:
H. I. STEFFA,
Mechanical Engineer.

LANGDON PEARSE,
Sanitary Engineer.

G. M. WISNER,
Chief Engineer.

CHAS. E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That I, Eugene E. Maher, as principal, and the Southern Surety Company, as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Forty-five Hundred Twenty-five Dollars and no Cents ($4,525.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That, whereas, the above bounden Eugene E. Maher has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing and delivering pumping machinery, including three (3) 14-inch centrifugal pumps and two (2) circulating pumps, and miscellaneous appurtenances, f. o. b. cars, The Chicago & North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division O of the attached contract.

Now, If the said Eugene E. Maher shall in all respects well and truly keep and perform the said contract on his part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Eugene E. Maher, his agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims, and repay any overpayment, also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Eugene E. Maher

in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Eugene E. Maher, or his agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Eugene E. Maher shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Eugene E. Maher (Seal)
By C. B. Adams,
Attorney-in-Fact.

Southern Surety Company (Seal)
By O. W. Huncke,
Attorney-in-Fact.

Approved as to Form May 1, A. D. 1919:
Chas. E. Anthony,
Assistant Attorney.

C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Finance reports that it has examined and approved the bond of the Stannard Power Equipment Company with the National Surety Company thereon as surety, on its contract for furnishing and delivering six blowers for the Desplaines River Sewage Treatment Works, designated as Division "R" of the specifications, for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Stannard Power Equipment Company, for the faithful performance of the contract above specified, said bond being in the penal sum of $11,397.50 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
Jas. H. Lawley,
Chairman.
Matt A. Mueller,
Willis O. Nance,
George W. Paullin,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the form of the contract and bond of the Stannard Power Equipment Company:

The Sanitary District of Chicago.
CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

This Agreement, Made and entered into this 1st day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Stannard Power Equipment Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering the Blowers, and the apparatus, equipment and appurtenances thereto, as called for under Division R of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specification, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division R, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the blowers, and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc.,

respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing and delivering f. o. b. cars, the C. & N. W. Ry., Maywood, Ill., the following:

Division R, Blowers, including six (6) blowers of the horizontal hydro-turbine type with appurtenances.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Provisions for Handling Equipment at Site.

(3) The Sanitary District will reserve a right-of-way to the station site, from First Avenue on the west. A hand crane will be installed under Division A and will be available for handling the equipment to be installed in the pump blower room. The Contractor shall operate this, however, at his own expense, and shall properly oil and maintain it during his use thereof.

The Contractor under Division A shall, at his own expense, provide any temporary blocking, supports or other protection for the pump and blower room floor necessary to prevent injury to the same, and shall make good at his own expense any damages done by him to the station structure or its appurtenances or to the equipment handled in unloading from the cars, hauling, unloading, and installing any of the equipment included under this contract for erection under Division A, or in removing plant or other property or in cleaning up.

It is expected that the superstructure of the station will be sufficiently advanced at the time of installation to afford protection from storms to the equipment included under this contract after the same is within the superstructure walls. The Contractor under Division A shall, however, furnish such protection as may be necessary against temperature, dust, dirt, and humidity, and shall be fully responsible for the protection of such equipment until its final acceptance.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION R.

Blowers—Separators.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and

type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division R, of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Shop Tests.

(8) Each blower shall be tested in the shop for the horse-power required to deliver the quantity of air specified at the various pressures specified. Full operating characteristics shall be determined as specified in Division R.

All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments and shall make the tests, and shall provide all facilities for the Engineer to inspect the work previous, during or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense, make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all the necessary equipment and facilities and shall make the tests as outlined herein.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division R), shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS.

DIVISION R, BLOWERS.

General.

(R1) The Contractor shall furnish the blowers herein specified, of the hydro-turbine type, chain driven, to furnish the quantities of air at the pressures specified respectively as follows. One (1) machine shall be furnished to deliver two thousand (2000) cubic feet per minute of free air against a working head of eight and one-half (8.5) pounds per square inch. Three (3) machines shall be furnished, each capable of delivering two thousand (2000) cubic feet per minute of free air against a working head of six and one-half (6.5) pounds per square inch. One (1) machine shall be furnished to deliver one thousand (1000) cubic feet per minute of free air against a working head of six and one-half (6.5) pounds per square inch. One (1) machine shall be furnished to deliver four hundred fifty (450) cubic feet per minute of free air against a working head of six and one-half (6.5) pounds per square inch. The machines shall be designed so that they will also work satisfactorily at a working head of eight (8) pounds per square inch.

Specifications and Plans.

(R2) The specifications and plans are intended to cover complete equipment. It is not the intent to give every detail in the plans and specifications. The Sanitary District will not be responsible for the absence of any detail the Contractor may require. No additional compensation will be allowed for material or labor used in performing any work hereunder unless the work can be clearly shown to be beyond the intent and scope of the plans and specifications, to the satisfaction of the Chief Engineer.

Materials.

(R3) Any materials for which no detailed specification is given herein shall be of the quality and character best adapted for the purpose for which they are to be used. No material shall be used for any purpose for which it has not previously been in use for a like purpose for a sufficient length of time to demonstrate its probable success for the purpose for which it is to be used.

Replacements.

(R4) The Contractor shall make the individual pieces of the machinery herein specified to be furnished in duplicate or triplicate to conform to exact dimensions on the working drawings made by the Contractor, so that no fitting or adjusting will be necessary in setting up the entire machine, other than such as is usually done in high-grade standard designed apparatus. This requirement will be rigidly enforced as it is essential that any defective piece of the machinery may be easily replaced by a new piece made in accordance with the drawings.

Castings, Bolts and Nuts.

(R5) All castings shall be free from blow-holes, shrinkage strains, cold shuts and like defects, and shall be smooth, true to form and of accurate dimensions.

All seats for bolt heads and nuts shall be spot-faced. Case hardened nuts shall be used on all covers, bonnets, pedestals and other parts requiring frequent removal or adjustment.

Eye bolts for all heavy parts requiring removal shall be furnished.

Blowers.

(R6) The blowers shall all be of the horizontal hydro-turbine type. The casing shall be made of close grained cast iron, with the internal chamber of the proper elliptical shape. The rotor shall consist of a cast-iron wheel casing with integral projecting blades, reinforced by shrouds. The wheel casing shall be machined on the sides. The rotor is to be mounted on a machined steel shaft, driven on and securely fastened in place by feather keys. The steel shaft

shall be supported by ball bearings, running in an oil well, mounted outside of the casing, to clear the stuffing box. The shaft shall be extended to the proper distance required to receive the chain sprocket. The rotor shall be pressed on and keyed on the shaft. On the two thousand and one thousand cubic feet per minute machines, bronze sleeves shall be furnished through the stuffing boxes, lightly driven on the shaft and secured by screws, to be readily removable. The stuffing boxes shall be made with cast-iron glands, with sufficient clearance to permit ready packing without disturbing the ball bearings.

The suction and discharge flanges of the blowers shall be faced and drilled to the American Standard pipe flange drilling.

Each casing shall be tapped for an inlet and outlet for water, with standard wrought iron pipe threads.

Each blower shall be equipped with two (2) oil filling pipes set in place, two (2) heavy bronze compression grease cups of the marine type, starting screws on the flanges of the casing, suitable eye bolts for handling, and brass square-headed plug cock and a brass shut-off valve on the water inlet.

The Contractor shall also furnish for each size of unit a wrench to fit the nuts on the main ball bearings.

Each blower shall be equipped with an adjustable relief valve, capable of being set at a given pressure, to blow off before the motor drive will be overloaded.

Chain Drive.

(R7) Each blower will be driven by an electric motor connected to it by a chain drive, as shown on the plans. The Contractor shall furnish with each blower the chain drive and sprockets, both for the blower and the motor end. The chain shall be of the Morse silent chain type or equal, of suitable size and strength to transmit the maximum horse power required when operating under full load. The chains shall be of the proper length to fit the distances, center to center, of motor and blower shown for the respective size of machine on Sheet A-4 of Division A. The sprockets shall also be furnished. The blower sprockets shall be bored, to a light drive fit and keyed on. The motor sprockets shall be furnished unbored, delivered to any point in the U. S. designated by the Chief Engineer.

Separators.

(R8) The Contractor shall furnish with each blower a separator of ample size to remove all particles of water from the compressed air. The separator shall be thoroughly baffled. The separator shall be made of cast iron or steel with a suitable arrangement for cleaning and inspection, of a design to be approved by the Engineer. The bottom of the separator shall be tapped for a wrought iron pipe to remove separated water. Each separator shall rest on its bottom or on suitable support. Suitable inlet and outlet flanges shall be provided for the air, of approved size faced and drilled to the American standard drilling. Each separator shall be provided with a water outlet designed to keep the separator properly drained, consisting of a ball-float valve mounted integral on a flange, to permit withdrawal.

The separators shall be designed to go in the basement as shown on the plans, and to be readily handled.

Painting.

(R9) The blowers are to be thoroughly painted before shipment. Each shall be given a priming coat, a coat of filler, and shall then be well rubbed down, followed by two (2) coats outside, of a machinery enamel paint of semi-gloss. The separators shall be thoroughly coated both inside and out, with at least two (2) coats of an approved asphaltum varnish or paint.

All exposed bright surfaces on steel wrought-iron or cast steel work shall be protected before shipment, with a heavy coat of white lead and tallow

Tests.

(R10) Each of the blower units furnished hereunder shall be assembled erected and completely tested with its separator in the shops of the manufacturer to determine the operating characteristics and also to determine whether or not the equipment meets all of the requirements of the specifications and contract. The capacity of each unit shall be determined at pressures of six and one-half, seven, eight and eight and one-half pounds

per square inch, together with the power required and the speed. The power at shut-off shall also be determined for 450 and 1000 c. f. m. size of blower and calculated for the 2000 c. f. m. blower.

The Contractor shall notify the Engineer when the equipment is ready for test so that the Engineer may have a representative present to witness the tests. All the expense of conducting such tests shall be borne by the Contractor and he shall furnish all instruments and all other equipment and material required for conducting said tests.

The Contractor shall hold in his shop a number of units, so that the tests on a number of blowers can be made during one or more consecutive days.

Results of Tests.

(R11) Should any equipment, when tested, fail to meet any of the requirements of the specifications or the performance guarantees, due to any weakness of construction or design, the Contractor shall, at his own expense, forthwith make such changes, betterments or replacements in any equipment so that said equipment when again tested will meet the requirements of the specifications and the performance guarantees.

If after such changes, betterments or replacements have been made to any equipment, and the result of any test on any such equipment shows that the equipment does not then meet the requirements of the specifications and the performance guarantees, then such equipment may be rejected by the Engineer and the Contractor hereby agrees to replace the same at his own expense with new equipment, which shall be tested in the same manner as the original equipment.

In the further event that the result of any test of said second new equipment show that said equipment does not meet the requirements of the specifications and the performance guarantees, then said equipment may be rejected by the Engineer, and if installed the said Contractor hereby agrees if so ordered to at once remove the rejected equipment and said Sanitary District is hereby authorized to purchase and install at the sole cost and expense of said Contractor, such other equipment as will meet the requirements.

All changes, betterments or replacements made after the installation shall be made subject to the acceptance of the Engineer at such time and in such manner as not to interfere with the operation of the station. The Sanitary District shall have the use of the equipment as originally installed, or replaced, without charge, until such time as the changes, betterments or replacements are made. Any changes, betterments or replacements that are made in the shops shall be made to the acceptance of the Engineer.

Transportation and Delivery.

(R12) The blowers and appurtenances furnished hereunder shall be delivered by the Contractor at his own risk, f. o. b. cars, on the Chicago and Northwestern Railway, Maywood, Ill., consigned to the contractor designated by the Chief Engineer.

Guarantee.

(R13) All equipment furnished hereunder shall be guaranteed free from mechanical defects in workmanship, design and material, and the Contractor shall replace, without cost to the Sanitary District, any part or parts proving defective within one (1) year after the equipment has been placed in operation, in accordance with the maintenance bond for this purpose specified under Article 34. The Contractor further guarantees the delivery of air and the horsepower required, together with the use of water, as stated in Article 35.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to

be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor

and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satify the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the

event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912"; approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein

mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporations for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division R hereby agrees to deliver the blowers to the railroad within two hundred and seventy (270) calendar days from the said date of the approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago and North-Western Railway, Maywood, Illinois.

It is understood and agreed that time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefor, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division R, within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of ten dollars ($10.00) for Division R, for each and every day that said Contractor shall be in default in the completion of said work ready for operation.

Provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payment under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions and Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defence, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to

strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.
Division R.

Art. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole therof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, machinery or equipment as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Division R. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be

satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Article 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION R.

Blowers.

For furnishing and delivery, complete, of the six (6) blowers of the horizontal hydro-turbine type, with separators and appurtenances, complete, as specified, f. o. b cars, the Chicago and North Western Railway, Maywood, Ill., the lump sum of twenty two thousand seven hundred ninety-five Dollars ($22,795.00).

The Contractor hereby guarantees the horsepower required for the blower units with the capacities specified will not exceed the horsepower stated for the pressures given:

Blower Capacity Cu. Ft. per Min.	H. P. Required 6.5 lb.	Per Unit at 8.5 lb.
Not less than 2,000	125	150
Not less than 1,000	60	75
Not less than 450	25	30

The Contractor further guarantees the use of water in the blower for compressing 1,000 cu ft. of air per min, will not exceed 50 gallons per minute, and that the blowers will give guaranteed capacity of air when flowing a minimum of 10 gallons per minute per 1,000 cubic feet of air per minute.

The Contractor further guarantees that the blowers to be furnished under this contract shall operate satisfactorily without undue wear, strain or vibration, and that the separators shall remove all the entrained water.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 36. Division R. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said

bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Finance Committee.
Attest:
John McGillen,
Clerk.
(Seal)

Stannard Power Equipment Co. (Seal)
By J. M. Stannard,
President.
Attest:
Geo. W. Clucas,
Secretary.

Approved May 7, 1919:
H. I. Steffa,
Mechanical Engineer.
Langdon Pearse,
Sanitary Engineer.
G. M. Wisner,
Chief Engineer.
Charles E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Stannard Power Equipment Company as principal and National Surety Co., as surety, are held firmly bound unto The Sanitary District of Chicago in the penal sum of eleven thousand three hundred ninety-seven dollars and fifty cents ($11,397.50), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May A. D. 1919.

The Condition of the Above Obligation Is Such, That whereas the above bounden Stannard Power Equipment Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing and delivering six (6) blowers of the horizontal hydro-turbine type, with appurtenances, f. o. b. cars, the Chi-

cago and North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division R, of the attached contract.

Now, If the said Stannard Power Equipment Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Stannard Power Equipment Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery- processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Stannard Power Equipment Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Stannard Power Equipment Company or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Stannard Power Equipment Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Stannard Power Equipment Co. (Seal)
By J. M. Stannard,
President.

Attest:
Geo. W. Clucas,
Secretary.

National Surety Co. (Seal)
By John McKechney,
Attorney-in-Fact.

Approved as to form May 7, A. D. 1919:
Charles E. Anthony,
Assistant Attorney.

C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has been advised by the Marshal that it is necessary to purchase miscellaneous hardware, tools and equipment for the gasoline launch "White Flyer" at an estimated cost of $324.21, and he requests that he may be authorized to make said purchase.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Marshal be, and he is hereby authorized and directed to purchase in the open market for the best price obtainable, the hardware, tools and equipment specified, provided the cost of the same shall not exceed the sum of $324.21.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 8, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of May payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

Sanborn Company (automatic gages)	$ 475.00	
J. W. Landis Mill Company (stakes and hubs)	21.00	
Nagle Bros. (coal)	12.00	
Josephine Eck (rent)	8.00	
Chicago Towel Company (towel service)	5.25	
Chicago Towel Company (towel service)	1.25	
Peoples Gas Light & Coke Company (gas service)	1.11	
Nelson Bros. Laundry (towel supply)	1.00	
Public Service Company of Northern Illinois (electrical energy)	.50	
A. Guthrie & Co. (extra labor and material, Calumet Sag Channel, Section 13, contract Nov. 4, 1915)	9.86	
		$ 534.97

Maintenance and Operation Account.

John McGillen, Clerk (freight charges C. B. & Q. Ry. on fuel Lawrence Ave. Pumping Station)	$ 338.11	
John McGillen, Clerk (freight charges C. & A. Ry. on fuel Lawrence Ave. Pumping Station)	1.00	
Edwards & Bradford Lumber Company (coal Lawrence Ave. Pumping Station)	1,655.17	
Nichols & Bookwalter (material and labor Lawrence Ave. Pumping Station)	84.03	
Amount carried forward		$ 2,613.28

Amount brought forward		$ 2,613.28
Sullivan Oil Company (oil Lawrence Ave. Pumping Station)	68.82	
Rhodes Metallic Packing Company (packing Lawrence Ave. Pumping Station)	47.04	
Link Belt Company (wheels and shaft Lawrence Ave. Pumping Station)	30.00	
Henry M. Joda (labor and material Lawrence Ave. Pumping Station)	19.69	
Theo. B. Robertson Products Company.. Inc. (soap powder Lawrence Ave. Pumping tation)	15.04	
Commonwealth Edison Company (Mazda lamps Lawrence Ave. Pumping Station)	11.51	
Jos. T. Ryerson & Son (beam Lawrence Ave. Pumping Station)	8.85	
Monarch Electric & Wire Company (fuses)	7.62	
Riddiford Bros. (brooms Lawrence Ave. Pumping Station)	3.94	
Sheridan Sheet Metal Works (material and labor Lawrence Ave. Pumping Station)	1.65	
Weil Bros. (pipe fittings Lawrence Ave. Pumping Station)	1.60	
The Wm. H. Reid Company (oil 39th St. Pumping Station)	209.46	
The Wm. H. Reid Company (oil 39th St. Pumping Station)	199.63	
The Kellogg-Mackay Company (valves 39th St. Pumping Station)	18.00	
Parker's Towel Supply Company (towel service 39th St. Pumping Station)	16.20	
Vaughn's Seed Store (lawn seed 39th St. Pumping Station)	1.33	
Cameron Amberg & Co. (twine and books)	180.60	
Bentley-Murray & Co. (printing)	132.50	
The Kellogg-Mackay Company (pipe fittings)	59.44	
Burr-Vack Company (transfer cases)	14.17	
Eugene Dietzgen Company (green cross section paper)	13.00	
Auto Radiator Mfg. Company (repairs)	10.00	
Burr-Vack Company (book and staples)	8.20	
American Bosch Magneto Corporation (platinum points)	5.42	
Chas. Novak & Son (material and labor)	4.60	
Central Furniture Repair Company (repairs)	3.25	
Chas. Novak & Son (sheet and setting)	2.30	
Parker's Towel Supply Company (towel service)	1.00	
Stebbins Hardware Company (screws)	.82	
John McGillen, Clerk (payroll repairs to Controlling Works, Main Channel)	358.50	
Green Engineering Company (bars, beams and clips)	105.55	
John McGillen, Clerk (special roll repairs to boilers, 39th St. Pumping Station)	165.00	
		3,803.04

Law Department.

John McGillen, Clerk (expenses of employe)	$ 13.00	
Mead & Wheeler (bookcase sections)	139.20	
Gunthorp-Warren Printing Company (printing)	42.17	
The Berkshire Company (folders)	37.14	
John McGillen, Clerk (amount paid Secretary of State for certified copy of incorporation certificate, including cancellation in re Byrne Bros. Dredging & Engineering Company)	3.50	
F. J. Koch Company (voucher forms)	23.75	
A. Hannibal (repairing chairs)	23.22	
Burr-Vack Company (inkstand, etc.)	17.80	
C. F. Pinneo (services rendered looking over property)	10.00	
Amount carried forward		$ 4,647.79

Amount brought forward		$ 4,647.79
Thos. Nicholson (services viewing land)	5.00	
J. M. Rhine (services viewing land)	3.00	
Underwood Typewriter Company (adjusting machine)	2.80	
		320.58
Police Department.		
John McGillen, Clerk (expenses of Marshal)	$ 30.00	
Chicago Telephone Company (telephone service)	2.80	
		32.80
General Account.		
John McGillen, Clerk (expense of trip to Springfield in re legislative matters, Mr. Ross C. Hall, First Assistant Attorney)	$ 15.81	
John McGillen, Clerk (expenses of employe)	28.25	
John McGillen, Clerk (expense of trip to Springfield in re legislative matters, Mr. Walter E. Beebe, Illinois Valley Attorney)	25.02	
Sweet-Wallach & Co. (albums and prints)	88.50	
Chicago Telephone Company (telephone service)	15.42	
		173.00
Electrical Department.		
John McGillen, Clerk (weekly payroll)	$ 230.05	
Victor Mfg. & Gasket Company (Victor gaskets)	18.13	
John McGillen, Clerk (water taxes)	9.38	
Buchanan-Daley Company (lumber)	256.26	
Norris Ward Coal Company, Inc. (coal)	191.88	
National Lead Company (solder)	190.85	
The Faultless Anchor & Mfg. Company (anchors)	175.98	
Thornton-Claney Lumber Company (lumber)	119.20	
John McGillen, Clerk (postage stamps)	105.18	
Western Electric Company (cable)	84.21	
Wm. Heggie (wire rope)	81.00	
Wilbur J. Connell (kettles)	66.63	
The Fred J. Ringley Company (printing)	60.00	
Western Union Telegraph Company (purchase of eight poles)	58.50	
Wm. Heggie (rails)	48.00	
Commonwealth Edison Company (batteries, etc.)	46.24	
Geo. B. Carpenter & Co. (carborundum wheels)	43.77	
Vesta Accumulator Company (battery, etc.)	36.25	
Frederick C. Hanmore, M. D. (professional services)	25.00	
Massachusetts Bonding Insurance Company (insurance)	20.00	
Wilbur J. Connell (hay wire, etc.)	19.80	
Barrett Hardware Company (hydraulic repairs and dredging)	19.52	
Delta Star Electric Company (varnish)	15.84	
Marshall Field & Co. (cheese cloth)	13.22	
Interstate Brass Company (H. H. brass)	12.47	
Windle Garage (rent of garage)	12.00	
H. Channon Company (handles, etc.)	12.00	
Humphrey & Sons Company (gear, etc.)	11.55	
Southwest Printing Company (printing)	11.25	
Cameron-Amberg & Co. (red ink, etc.)	5.02	
Jas. Carmichael (plumbing)	4.80	
Air Reduction Sales Company (oxygen)	4.00	
Manning Bros. Garage (inner bearing, etc.)	2.33	
The Lombard Governor Company (special washers)	1.29	
Jos. T. Ryerson & Son (riveting burrs)	.44	
		2,012.04
Amount carried forward		$ 6,876.43

Amount brought forward			$ 6,876.43

Miscellaneous Accounts.

John McGillen, Clerk (expenses of Chief Engineer)—			
Maintenance and Operation Account	$ 42.85		
General Account	228.37		
		$ 271.22	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 7.96		
Maintenance and Operation Account	2.55		
Clerical Department	20.80		
General Account	.59		
Electrical Department	1.80		
		33.70	
Edmund D. Adcock, Attorney (professional services rendered from Jan. 2, 1919, to March 31, 1919, re Metropolitan Bridge case; United States of America vs. Sanitary District (Lake Level Controversy), and miscellaneous matters attending Board meetings, consultations, etc.)—			
Law Department	$1,900.00		
General Account	500.00		
		2,400.00	
John McGillen, Clerk (payroll, repairs North Shore Channel bridges)—			
Construction Account	$ 258.60		
Maintenance and Operation Account	1,022.19		
		1,280.79	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 36.98		
Maintenance and Operation Account	19.51		
		56.49	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 19.30		
Maintenance and Operation Account	43.49		
		62.79	
John McGillen, Clerk (payroll, special, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 144.00		
Electrical Department	96.00		
		240.00	
			4,344.99
Grand Total			$ 11,221.42

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
GEORGE W. PAULLIN,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel (*except as to voucher to Edmund D. Adcock for legal services for $2,400.00, on which Mr. Sergel voted "nay"*), Carr, Clark, Healy, Lawley, Littler, Mueller, Nance (*except as to voucher to Edmund D. Adcock for legal services for $2,400.00, on which Mr. Nance voted "nay"*) and Paullin—Seven

on all vouchers and nine on all vouchers not excepted.

Nays—None (except as above stated).

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that in order to complete the dredging of the forebay at the Power House, it is advisable to purchase a second-hand ten-inch centrifugal pump and equipment.

He further states that he obtained competitive bids for furnishing said pump and equipment, and the lowest bid received was that of the William Heggie Company of Joliet, Illinois, for the sum of $426.25, and he recommends that said bid be accepted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to accept the bid of William Heggie Company to furnish said pump and equipment for the sum of $426.25.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
MATT A. MUELLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that he is about to resume the work of repairing the walls of the Main Channel near Lockport, and in order to perform said work economically it is advisable to purchase a portable, gasoline-driven, three-quarter yard concrete mixer at an estimated cost of $1,200.00, which will obviate the necessity of renting such a mixer at a yearly cost of $900.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to obtain informal bids for a concrete mixer as specified above and transmit same to the Committee on Engineering.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents renewal contract with Maurice Tauber Company, 2599 Archer avenue, wherein said company agrees to take, and the Sanitary District agrees to furnish, seventy kilowatts of electrical energy for the time and upon the terms and conditions therein set forth, which contract has been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby authorized and directed to execute in duplicate the attached contract which has heretofore been executed by said Maurice Tauber Company.

Respectfully submitted,
H. E. LITTLER,
Chairman.
WM. J. HEALY,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Real Estate Development.

Mr. Carr presented the following report from the Committee of Real Estate Development:

CHICAGO, May 8, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Real Estate Development transmits herewith a form of lease to be entered into between The Sanitary District of Chicago and Stanley Kler, by the terms of which the Sanitary District leases to him lots one hundred seventy-two (172) and one hundred seventy-three (173) of the Sanitary District Trustees' subdivision, containing 35.50 acres more or less, situated in Cook County, from January 1, 1919, to December 31, 1923, at an annual rental of $177.50, payable in advance.

Your Committee further reports that said lease has been approved by the Attorney, and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby authorized and directed to execute the form of lease herewith submitted with Stanley Kler, the same having been duly executed by him.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
MATT A. MUELLER,
WM. J. HEALY,
WILLIS O. NANCE,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

NEW BUSINESS.

Mr. Clark presented the following editorial from the Chicago Tribune of April 28, 1919:

"THE DRAINAGE SLUDGE PLANT."

"Applause is due the Drainage Board for expediting the construction of the Desplaines river activated sludge plant, bids for which have been opened. The plant will amply provide artificial aid to the natural cleansing processes of the drainage canal in the disposition of sewage and render it possible for the Sanitary District greatly to enlarge its territory of operation. Several new districts will, in the course of time, be added to the original sphere of influence of the Sanitary District, and the Trustees do well to keep scientifically ahead of the need for septic disposal of sewage. The sludge plant will forestall any possibilities of down-state pollution."

Mr. Clark moved that the editorial be printed in the Proceedings.

The motion prevailed.

Committee of the Whole.

The Board resolved itself into the Committee of the Whole to permit Mr. C. Arch Williams, Attorney, to make a statement in reference to a decision of the Supreme Court of Illinois relative to the powers of the State Public Utilities Commission.

The President called Mr. Healy to the chair.

The Committee rose and the Board resumed business.

Mr. Clark reported verbally that about a year ago the mayors and other representatives of various cities and villages of northern Indiana, in a spirit of cooperation, met with the Trustees of the Sanitary District and discussed methods of solving the problem of sewage disposal in said territory and the purification of the waters of Lake Michigan.

He further reported that he was informed that the Legislature of the State of Indiana had passed a law, subject to a referendum, authorizing the formation of drainage districts in northern Indiana for the purpose of diverting sewage from Lake Michigan, and that a meeting of the members of the Board of Trustees of the Sanitary District and representatives of these various cities and villages of northern Indiana had been suggested for the evening of May 22, 1919, at Chicago, to discuss the subject.

It was the sense of the Board that said meeting be held.

ADJOURNMENT.

Mr. Littler moved that the Board adjourn.

The motion prevailed.

John W. Gilbert, Clerk.

C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, MAY 15, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

BIDS.

The Clerk opened and read the bids received for plumbing and pipe work for the Calumet and the Evanston Pumping Stations, as shown in the schedules printed on page 534 of the Proceedings.

THE SANITARY DISTRICT OF CHICAGO.

BIDS RECEIVED FOR PLUMBING AND PIPE WORK
CALUMET SEWAGE PUMPING STATION

EVANSTON SEWAGE PUMPING STATION

DIVISION E.

May 15, 1919.

1.	Carl John Stein Co.	$10,542.00
2.	Murphy Plumbing Co.	10,548.00
3.	M. J. Corboy Co.	10,775.00
4.	Jones & Jacoby	10,815.00
5.	John Degnan, Inc.	11,880.00*
6.	Hanley & Company	12,170.00*
7.	American Heating & Plumbing Corp.	12,788.00*
8.	G. Albin Nilson	17,522.00
	Two lowest bids combined.	
	Carl John Stein Co., Subdivision A—Calumet	$ 8,442.00
	Murphy Plumbing Co., Subdivision B—Evanston	1,806.00
	Total	$10,248.00

*Bid as an entirety.

THE SANITARY DISTRICT OF CHICAGO.

BIDS RECEIVED FOR PLUMBING AND PIPE WORK
CALUMET SEWAGE PUMPING STATION

DIVISION E—SUBDIVISION A.

May 15, 1919.

1.	Carl John Stein Co.	$ 8,442.00
2.	Jones & Jacoby Co.	8,465.00
3.	Murphy Plumbing Co.	8,742.00
4.	M. J. Corboy Co.	8,900.00
5.	Hanley & Company	9,577.00
6.	American Heating & Plumbing Corp.	10,443.00
7.	Chas. S. Lawrence	11,053.00
8.	H. P. Reger & Co.	11,290.00
9.	Kohlbry-Howlett Co.	12,209.00
10.	G. Albin Nilson	14,360.00

THE SANITARY DISTRICT OF CHICAGO.

BIDS RECEIVED FOR PLUMBING AND PIPE WORK
EVANSTON SEWAGE PUMPING STATION

DIVISION E—SUBDIVISION B.

May 15, 1919.

1.	Murphy Plumbing Co.	$1,806.00
2.	M. J. Corboy Co.	1,875.00
3.	Carl John Stein Co.	2,100.00
4.	Hulbert & Dorsey (By letter)	2,148.00
5.	John J. Cahill	2,343.00
6.	American Heating & Plumbing Corp.	2,345.00
7.	Jones & Jacoby	2,350.00
8.	Hanley & Company	2,693.00
9.	G. Albin Nilson	3,162.00

Item		6 N. Nielsen, Chicago		7 J. J. Croake Co., Chicago		8 Leyden-Ortseifen Company, Chicago		9 Warner Const. Co., Chicago	
1	10	$ 5,250.00	$1.50	$ 3,750.00	$3.00	$ 7,500.00	$2.05	$ 5,125.00	
2	00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	
3	75	87.50	2.00	100.00	3.00	150.00	.25	12.50	
4	50	2,625.00	2.00	1,500.00	3.00	2,250.00	1.16	870.00	
5	00	375.00	3.00	375.00	2.50	312.50	3.15	393.75	
6	50	175.00	5.00	250.00	8.00	400.00	5.22	261.00	
7	.	250.00	...	.....	...	350.00	...	893.00	
8	.	12,710.00	...	17,204.00	...	13,500.00	...	12,680.00	
9	.	1,925.00	...	2,460.00	...	2,500.00	...	2,009.00	
10	.	2,119.00	...	1,625.00	...	2,500.00	...	1,360.00	
11	.	6,196.00	...	6,994.00	...	5,500.00	...	5,485.00	
12	.	2,350.00	...	3,650.00	...	2,000.00	...	2,100.00	
13	.	1,962.00	...	1,790.00	...	2,000.00	...	2,033.00	
14	50	150.00	2.00	200.00	1.00	100.00	.60	60.00	
15	00	100.00	1.00	100.00	1.00	100.00	.35	35.00	
16	.	375.00	...	100.00	...	1,000.00	...	10.00	
17	00	100.00	.25	50.00	.30	60.00	.25	50.00	
18	.	620.00	...	313.00	...	280.00	...	341.00	
19	75	306.25	3.286	575.00	1.50	262.50	1.577	276.00	
20	53¾	2,357.50	.06	2,460.00	.06	2,460.00	.06	2,460.00	
21	00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	
22	00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	
23	00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	
24	99	89.00	1.25	125.00	2.00	200.00	2.20	220.00	
	.	$40,132.25	...	$43,881.00	...	$43,335.00	...	$36,041.25	
	.	$40,382.25	...	.....	...	$43,685.00	...	$36,934.25	

THE SANITARY DISTRICT OF CHICAGO.

TABULATION OF BIDS FOR CONSTRUCTION OF MORTON GROVE SPRINKLING FILTER PLANT.

Received May 15, 1919.

Item	DESCRIPTION OF ITEM	Estimated Quantities	1 Schillinger Const. Company, Chicago		2 Knowles & Fehr, Inc., Chicago		3 Hoeffer & Company, Chicago		4 Nash-Dowdle Co., Chicago		5 Paschen Brothers, Chicago		6 S. N. Nielsen, Chicago		7 J. J. Croake Co., Chicago		8 Leyden-Ortseifen Company, Chicago		9 Warner Const. Co., Chicago	
1	Earth excavation	2,500 cubic yards	$1.65	$ 4,125.00	$1.50	$ 3,750.00	$1.25	$3,125.00	$3.00	$ 7,500.00	$1.80	$ 4,500.00	$2.10	$ 5,250.00	$1.50	$ 3,750.00	$3.00	$ 7,500.00	$2.05	$ 5,125.00
2	Rock excavation	5 cubic yards	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00
3	Rolled embankment	50 cubic yards	2.00	100.00	3.00	150.00	1.75	87.50	6.00	300.00	3.60	180.00	1.75	87.50	2.00	100.00	3.00	150.00	.25	12.50
4	Loam	750 cubic yards	2.75	2,062.50	3.00	2,250.00	2.25	1,687.50	4.00	3,000.00	3.60	2,700.00	3.50	2,625.00	2.00	1,500.00	3.00	2,250.00	1.16	870.00
5	Sand fill	125 cubic yards	3.0	375.00	3.00	375.00	2.25	281.25	4.00	500.00	3.30	412.50	3.00	375.00	3.00	375.00	2.50	312.50	3.15	393.75
6	Roadways and Walks	50 cubic yards	1.75	87.50	5.00	250.00	4.00	200.00	10.00	500.00	4.00	200.00	3.50	175.00	5.00	250.00	8.00	400.00	5.22	261.00
7	Seeding and planting	Lump Sum	...	.....	...	.....	...	.....	...	750.00	...	.....	...	250.00	...	.....	...	350.00	...	893.00
8	Sprinkling filter and pump well	Lump Sum	...	14,336.00	...	14,500.00	...	13,825.00	...	13,000.00	...	12,334.00	...	12,710.00	...	17,204.00	...	13,500.00	...	12,680.00
9	Secondary settling tanks	Lump Sum	...	3,513.00	...	3,000.00	...	2,756.00	...	5,000.00	...	4,500.00	...	1,925.00	...	2,460.00	...	2,500.00	...	2,009.00
10	Sludge bed and sludge piping	Lump Sum	...	1,771.00	...	1,500.00	...	1,649.00	...	2,500.00	...	1,800.00	...	2,119.00	...	1,625.00	...	2,500.00	...	1,360.00
11	Filter and pump well house	Lump Sum	...	5,370.00	...	6,750.00	...	5,548.00	...	9,000.00	...	6,400.00	...	6,196.00	...	6,994.00	...	5,500.00	...	5,485.00
12	Pumping machinery	Lump Sum	...	2,450.00	...	3,000.00	...	4,000.00	...	3,000.00	...	3,430.00	...	2,350.00	...	3,650.00	...	2,000.00	...	2,100.00
13	Building and remodelling miscellaneous manholes.	Lump Sum	...	2,098.00	...	2,500.00	...	2,015.00	...	1,200.00	...	2,000.00	...	1,962.00	...	1,790.00	...	2,000.00	...	2,033.00
14	Wire fencing	100 lineal feet	1.75	175.00	1.50	150.00	2.00	200.00	3.00	300.00	1.10	110.00	1.50	150.00	2.00	200.00	1.00	100.00	.60	60.00
15	Replacing wire fencing	100 lineal feet	1.00	100.00	.50	50.00	1.50	150.00	3.50	350.00	1.00	100.00	1.00	100.00	1.00	100.00	1.00	100.00	.35	35.00
16	Removal of bridge	Lump Sum	...	406.00	...	200.00	...	100.00	...	400.00	...	500.00	...	375.00	...	100.00	...	1,000.00	...	10.00
17	Slope paving	200 square feet	.15	30.00	.40	80.00	.20	40.00	.50	100.00	2.00	400.00	.50	100.00	.25	50.00	.30	60.00	.25	50.00
18	Cover for bulkoff tanks	Lump Sum	...	329.00	...	350.00	...	273.00	...	600.00	...	640.00	...	620.00	...	313.00	...	280.00	...	341.00
19	Ten inch tile pipe	175 lineal feet	1.60	280.00	1.35	236.25	2.00	350.00	3.50	612.50	1.50	262.50	1.75	306.25	3.286	575.00	1.50	262.50	1.577	276.00
20	Reinforcing steel	41,000 pounds	.05¼	2,152.50	.05	2,050.00	.06	2,460.00	.10	4,100.00	.06½	2,665.00	.05¾	2,357.50	.06	2,460.00	.06	2,460.00	.06	2,460.00
21	Additional concrete, Class A	5 cubic yards	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00
22	Additional concrete, Class B	5 cubic yards	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00
23	Timbering left in place	5 M. ft. B. M.	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00
24	Labor for adjusting sewage distribution system..	100 man-hours	1.25	125.00	1.00	100.00	1.25	125.00	5.00	500.00	1.50	150.00	.89	89.00	1.25	125.00	2.00	200.00	2.20	220.00
	Total Exclusive of Item 7	.....	...	$40,145.50	...	$41,501.25	...	$39,132.25	...	$52,722.50	...	$43,544.00	...	$40,132.25	...	$43,881.00	...	$43,335.00	...	$36,041.25
	Total Inclusive of Item 7	.....	...	.....	...	.....	...	.....	...	$53,472.50	...	.....	...	$40,382.25	...	.....	...	$43,685.00	...	$36,934.25

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

The Clerk opened and read the bids received for the construction of the Morton Grove Sprinkling Filter Plant, as shown in the schedule printed on page 535A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of April, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT

FOR APRIL, 1919.

Balance on hand at date of last report		$473,489.34
Receipts.		
Electrical Department (working capital)	$124,975.97	
Collector, City of Evanston	27,612.17	
Collector, Town of Cicero	18,087.55	
Collector, Town of Oak Park	16,327.96	
Collector, Town of New Trier	12,829.27	
Collector, Town of Berwyn	3,855.38	
Collector, Town of Riverside	3,497.50	
Collector, Town of River Forest	2,508.94	
Collector, Town of Lyons	2,415.34	
Collector, Town of Worth	2,304.55	
Collector, Town of Northfield	1,124.66	
Collector, Town of Leyden	898.05	
Collector, Town of Stickney	844.82	
Collector, Town of Maine	443.83	
Collector, Town of Bremen	311.32	
T. J. Forschner Contracting Company	3,045.23	
Water Service	1,670.00	
Land Revenue	1,442.20	
Interest and Premium on Bonds	1,140.00	
Bills Receivable	333.33	
Cost of Law Cases	26.00	
Pumping Stations (Maintenance and Operation)	.99	
Interest on Bank Balance, Geo. M. Reynolds, Treas.	852.39	
Total cash received for month		226,547.45
		$700,036.79
Expenditures.		
Clerical Department	$ 1,486.23	
Law Department	18,464.41	
Electrical Department	30,215.00	
Treasury Department	104.16	
Police Department	4,273.78	
General Account	12,662.94	
Maintenance Account	14,191.95	
Construction Account	148,794.49	
Bond Account	150,000.00	
Bond, Interest and Premium Account	78,560.00	

Land Damages	12,500.00	
Illinois & Michigan Canal and Illinois River Conditions Department	1,629.61	
Real Estate	435.44	
Law Cases	408.33	
Total cash disbursed		$473,726.34
Balance this date in the Continental & Commercial National Bank	226,310.45	
		$700,036.79

G. M. REYNOLDS,
Treasurer.
J. R. WASHBURN,
Asst. Treasurer.

Chicago, May 12, 1919.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance, in accordance with Rule 46 of the Rules and Regulations of the Board herewith presents weekly reports made to your Committee by the Clerk of all purchases made by him for and on account of The Sanitary District of Chicago from February 3 to March 29, 1919, inclusive.

Your Committee further reports that it has examined said reports, found them to be correct, has approved same and recommends that they be accepted and placed on file.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Electrical Engineer, in which he states that it is advisable to obtain and set out plants and flowers in the flower beds at the Terminal Station at an estimated cost of $100.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized to purchase and set out said plants and flowers, provided that the cost of the same shall not exceed the sum of $100.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 8, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that the Board on March 10, 1919 (page 323 of the Proceedings), authorized the Marshal to purchase a boat for the use of the Police Department at a cost of not to exceed $1,450.00.

Your Committee further reports that pursuant to said authority, the Marshal purchased a gasoline driven launch, the "White Flyer," for the sum stated and that he has now received an offer from A. Rosenow to purchase the old police boat, the "Illinoy," which is no longer necessary for the use of the Sanitary District, for the sum of $125.00, its appraised valuation.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Marshal be, and he is hereby authorized and directed to accept the offer of A. Rosenow to purchase the old police boat "Illinoy" for the sum of $125.00, and to execute on behalf of the Sanitary District a bill of sale therefor on the receipt of said purchase price.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has received a communication from the Electrical Engineer transmitting a form of sales contract in duplicate between the Air Reduction Sales Company and the Sanitary District covering the purchase by the Sanitary District of acetylene and oxygen gases from May 4, 1919, to May 4, 1920.

The Electrical Engineer states that said gases are used in the work of the Electrical Department and the amounts used from time to time will not cost to exceed the sum of $500.00 in the aggregate, and he recommends that said contract be executed, as by so doing he can obtain favorable discounts which would not be allowed if no contract was entered into.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute said contract in duplicate.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of May payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for the First Half of May, 1919.

John McGillen, Clerk (general payroll)	$ 27,314.15

Construction Account.

T. J. Forschner Contract Company (work on Calumet Sewage Pumping Station)	$ 49,973.18	
John McGillen, Clerk (expenses of employes)	108.02	
John McGillen, Clerk (expenses of employes)	90.16	
John McGillen, Clerk (expenses of employes)	71.05	
John McGillen, Clerk (gas service)	2.17	
John McGillen, Clerk (gas service)	1.46	
Baltimore & Ohio-Chicago Terminal R. R. (labor, material, tools and equipment, constructing tracks, etc., B. & O.-C. T. R. R. on account of Calumet-Sag Channel)	40,000.00	
The Chicago, Rock Island & Pacific Railway Company (labor and material)	1,604.95	
The Chicago, Rock Island & Pacific Railway Company (material)	202.86	
August H. Skoglund (resetting curbing)	116.00	
The Bristol Company (gauges and charts)	57.06	
Engineering & Contracting (advertising)	44.25	
McCallum & Clark (rent)	25.00	
Orrin Eames (rent)	20.00	
Chicago Towel Company (towel service)	5.25	
United States Rubber Company (hip boots)	5.20	
Chicago Towel Company (towel service)	1.25	
		92,327.86

Maintenance and Operation Account.

John McGillen, Clerk (freight charges for fuel at Lawrence Ave. Pumping Station)	$ 3.00	
American Supply Company (sanitary wipers, Lawrence Ave. Pumping Station)	48.65	
Sullivan Oil Company (engine oil, Lawrence Ave. Pumping Station)	48.03	
Lynch-Clarisey Company (boiler compound, Lawrence Ave. Pumping Station)	44.03	
Hills-McCama Company (water alarms and plugs, Lawrence Ave. Pumping Station)	10.00	
Parker's Towel Supply Company (towel service, Lawrence Ave. Pumping Station)	5.00	
Amount carried forward		$119,800.72

Amount brought forward		$119,800.72
Sheridan Sheet Metal Works (labor and material, Lawrence Ave. Pumping Station)	4.10	
The Peoples Gas Light & Coke Company (gas service, Lawrence Ave. Pumping Station)	.45	
Consumers Company (coal, 39th St. Pumping Station)	1,072.80	
The Kellogg-Mackay Company (pipe and fittings, 39th St. Pumping Station)	295.11	
Crane Company (gate valve, 39th St. Pumping Station)	278.10	
Lynch-Clarisey Company (boiler compound, 39th St. Pumping Station)	127.28	
American Steam Conveyor Corporation (supplies, 39th St. Pumping Station)	86.11	
Mabbs Hydraulic Packing Company (rawhide packing, 39th St. Pumping Station)	81.00	
Geo. B. Carpenter & Co. (supplies, 39th St. Pumping Station)	66.53	
H. W. Johns-Manville Company (cement, 39th St. Pumping Station)	54.00	
The Lunkenheimer Company (valves, 39th St. Pumping Station)	49.80	
Wilbur J. Connell (supplies, 39th St. Pumping Station)	24.80	
Chicago Fire Brick Company (fire brick, 39th St. Pumping Station)	34.30	
Wilbur J. Connell (supplies, 39th St. Pumping Station)	32.27	
H. P. Reger & Co. (labor and material, 39th St. Pumping Station)	12.40	
H. M. Hooker Glass & Paint Company (lard oil, 39th St. Pumping Station)	6.15	
Jos. T. Ryerson & Son (bar steel, 39th St. Pumping Station)	5.01	
The Lord & Bushnell Company (lumber, 39th St. Pumping Station)	2.55	
Bissell Laundry (towel service, 39th St. Pumping Station)	1.41	
The Texas Company (oil)	39.84	
G. Johnson (teaming)	27.00	
Buff & Buff Mfg. Company (repairing gauge)	18.00	
The Fred J. Ringley Company (printing)	17.50	
The Bristol Company (charts)	8.99	
Burr-Vack Company (records and self-dater)	8.50	
Vaughan's Seed Store (lawn seed)	5.81	
The Texas Company (Texaco grease)	3.75	
Crane Company (pipe fittings)	3.53	
Arthur Jones Electric Company (Westinghouse generator brushes)	2.94	
Weil Bros. (fittings)	2.42	
Public Service Company of Northern Illinois (power service)	1.50	
Parker's Towel Supply Company (towel service)	1.00	
		2,533.66
Illinois & Michigan Canal and Illinois River Conditions Department.		
Burr-Vack Company (journal sheets)		4.84
Law Department.		
John McGillen, Clerk (expenses of employe)	$ 13.05	
Martin Delaney (services rendered and expenses incurred)	196.03	
West Publishing Company (subscriptions)	15.50	
Callaghan & Co. (law books)	14.15	
The Fred J. Ringley Company (letterheads)	5.00	
Geo. F. Fitzgerald (stenographic services)	2.00	
Burr-Vack Company (1 quart alcohol)	.75	
		246.48
Amount carried forward		$122,426.99

Amount brought forward		$122,426.99
Clerical Department.		
Art Metal Construction Company (docket file case, etc.)	$ 695.46	
The Fred J. Ringley Company (printing)	40.00	
Burr-Vack Company (binders, etc.)	17.60	
		753.06
Police Department.		
John McGillen, Clerk (expenses of employes)	$ 26.90	
Miller Hardware Company (glass and putty)	7.11	
		34.01
General Account.		
John McGillen, Clerk (expenses of officials to Springfield and return)	$ 15.46	
Hinckley & Schmitt (drinking water)	85.00	
Commonwealth Edison Company (lamps, ink wells and clock)	14.63	
A. Hannibal (repairing chair)	2.50	
		117.59
Electrical Department.		
John McGillen, Clerk (semi-monthly payroll)	$ 17,001.54	
John McGillen, Clerk (expenses of employes)	637.83	
Union Petroleum Company (gasoline)	440.76	
Commonwealth Edison Company (Minerallac, etc.)	421.69	
Nelson & Le Moon (motor)	375.00	
Central Electric Company (wire, etc.)	315.00	
L. Stern & Sons (quartering Co. "B," 1st Reg. Inf., guard duty)	200.00	
Nelson & Le Moon (installing new motor and labor)	168.21	
Rogers & Hall (proposal booklets)	142.25	
Jos. T. Ryerson & Son (steel, etc.)	135.19	
Jeffery-Dewitt Insulator Company (units)	119.00	
American Supply Company (white waste)	85.63	
L. L. Fleig & Co., Inc. (linen tape rolls)	56.35	
American Supply Company (sanitary wipers)	55.21	
Commonwealth Edison Company (parts for enclosed cartridge fuses)	53.08	
Humphrey & Sons Company (segment casting)	44.20	
The Lord & Bushnell Company (lumber)	43.95	
L. L. Fleig & Co., Inc. (flexible micabond)	43.12	
Overland Motor Company (repair parts)	42.75	
The Essenkay Products Company (tires)	42.50	
Hess Warming & Ventilating Company (lockers)	39.00	
Henry M. Joda (sheet iron kettles)	38.40	
The Kellogg-Mackay Company (malleable pipe tees, etc.)	37.80	
Burr-Vack Company (Shannon transfer cases)	37.39	
A. Sharp (new axle, etc.)	35.25	
Arthur Jones Electric Company (repairing frame-generator)	30.86	
L. L. Fleig & Co., Inc. (fibre bushings)	28.05	
Riddle & Wunderle Company (office supplies)	27.75	
G. Johnson (teaming)	26.73	
Vesta Accumulator Company (battery, etc.)	25.53	
The Texas Company (gasoline and oil)	24.00	
Standard Oil Company (gasoline, etc.)	20.20	
American Bosch Magneto Corporation (magneto repaired)	19.82	
The C. H. Hanson Company (brass stencils)	19.11	
Buckley & Buckley (pencil carbon)	18.50	
Western Electric Company (copper lugs)	8.10	
H. P. Reger & Co. (washers, etc.)	7.25	
Belden Mfg. Company (wire)	6.72	
Central Electric Company (conduit elbows)	6.61	
Amount carried forward		$144,211.98

Amount brought forward		$144,211.98
Auto Radiator Mfg. Company (repairing radiator)	6.50	
S. Deschauer Company (hose coupling, etc.)	6.37	
H. Channon Company (sash brushes, etc.)	6.33	
Garden City Spring Works (replacing broken springs)	6.05	
H. M. Hooker Glass & Paint Company (turpentine)	5.95	
Riddiford Bros. (varnish brushes)	5.11	
Chas. Verwer (return of meter deposit)	5.00	
Staehely Bros. (tubes vulcanized, etc.)	5.00	
Eugene Dietzgen Company (level books)	4.50	
Western Union Telegraph Company (clock)	3.75	
International Harvester Company (spray needle, etc.)	3.59	
Old Glory Mfg. Company (O. G. wool, U. S.)	3.50	
United States Rubber Company (knee boots)	3.50	
The Western Union Company (clock service)	3.00	
Air Reduction Sales Company (Presto Light tank)	2.00	
Addressograph Company (plates and cards)	2.00	
Underwood Typewriter Company, Inc. (adjusting typewriter)	1.50	
S. & L. Motor Company (radiator fan and pulley)	1.20	
Fuller-Morrison Company (cyanide lump)	.45	
The C. H. Hanson Company (brass tags)	17.84	
Electrical Testing Bureau (watt hour meters)	16.00	
Humphrey & Sons Company (cast iron solid wheels)	13.02	
The Berkshire Company (green bond paper)	11.76	
A. C. Miller (gasoline)	11.50	
Parker's Towel Supply Company (towel service)	11.00	
Consumers Company (copper lugs)	9.22	
		21,045.97

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 45.57		
Maintenance and Operation Account	53.83		
		$ 99.40	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 51.91		
Maintenance and Operation Account	16.98		
		68.89	
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 11.05		
Law Department	12.95		
Police Department	.50		
General Account	196.97		
Electrical Department	4.60		
		226.07	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 35.17		
Maintenance and Operation Account	13.18		
		48.35	
Western Union Telegraph Co. (clock service)—			
Clerical Department	$ 3.00		
General Account	3.00		
		6.00	
			448.71
Grand Total			$144,826.33

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel (*except as to vouchers to the Consumers Company, for coal, in the sum of $1,072.80, and to the T. J. Forschner Contracting Company, for work on the Calumet Sewage Pumping Station for $49,973.18, on which Mr. Sergel voted "nay"*), Carr, Clark, Healy, Lawley, Littler, Mueller, Nance (*except as to voucher to the T. J. Forschner Contracting Company, for work on the Calumet Sewage Pumping Station, for $49,973.18, on which Mr. Nance voted "nay"*) and Paullin—Seven on all vouchers and nine on all not excepted.

Nays—None (*except as above stated*).

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has agreed with Mr. Francis A. Horrigan, owner of:

The south half of the following described land all situated in Section three (3), Township thirty-six (36) North, Range ten (10) East of the Third Principal Meridian, in Will County, Illinois, to-wit:

The east half of the southwest quarter and the west fraction of the southeast quarter of Section three (3) Also beginning at a line stone at the southeast corner of the west half of the southwest quarter of said Section three (3) running thence north on the east line of said tract forty (40) chains to a stone on the East and West center line of said section at the Northeast corner of said tract, thence west one (1) chain and six (6) links to a stone in the center of the road at the northwest corner of said tract, thence south thirty (30) minutes west along the center of the road forty (40) chains and one (1) link to a stone at the southwest corner of said tract, thence east along the south line of said section, one (1) chain and forty-seven (47) links to place of beginning, containing five and four one-hundredths (5.04) acres more or less excepting and reserving from the whole of the above described land, that part thereof described as follows, to-wit: Commencing at a point in the center of the highway running in a northerly direction through the southwest quarter of said Section three (3), said point being on the section line between Section three (3), and Section ten (10) in said Township thirty-six (36) and running thence in a northerly direction along the center of said highway two hundred ninety-one (291) feet, thence east two hundred thirty-two feet, thence south two hundred ninety-one (291) feet, to the section line, thence west along said section line between Sections three (3) and ten (10) aforesaid two hundred thirty-two (232) feet to the place of beginning, to purchase said tract as part of the right of way of the storage basin to be used in connection with the operation of the Main Channel and the power plant of the Sanitary District.

Your Committee further reports that said purchase is made at the price of $80.00 an acre, making a total consideration to be paid therefor of $7,840.00.

Your Committee is of the opinion that said price is a reasonable one and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant in the sum of $7,840.00, payable to Francis A.

Horrigan and deliver the same to him upon the delivery by him to the Sanitary District of a warranty deed conveying to it said real estate in fee simple.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

Mr. Nance moved as a substitute for the report of the Committee on Finance, that the matter be referred to the Chief Engineer for an early report as to the practicability of installing and operating said basin..

Mr. Clark moved that the substitute of Mr. Nance be laid on the table.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

The question recurring, on the motion to adopt the report and pass the order was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Finance reports that it has examined and approved the bond of the Builders Iron Foundry, with the American Surety Company of New York thereon as surety, for the faithful performance of its contract for furnishing and delivering Venturi meters, including miscellaneous sewage and air Venturi meters, with recording and indicating apparatus for the Desplaines River Sewage Treatment Plant, designated as Division "W" of the specifications, to The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Builders Iron Foundry, for the faithful performance of the above specified contract, said bond being in the penal sum of $6,380.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond of the Builders Iron Foundry:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR DESPLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this 6th day of May, A. D. 1919, by and between The Sanitary District

of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Builders Iron Foundry, a corporation organized under the laws of the State of Rhode Island, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering the Venturi meters and the apparatus, equipment and appurtenances thereto, as called for under Division W of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago & North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division W, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the Venturi meters, and all other fittings and appurtenances, including all materials, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications

following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such orders shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22d streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing and delivering f. o. b. cars, the C. & N. W. Ry., Maywood, Ill, the following: Division W, Venturi meters, including miscellaneous sewage and air Venturi meters with recording and indicating apparatus.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION W.

Venturi Meters—Recording Apparatus.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalogue number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the

dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division W of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Shop Tests.

(8) All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments and shall make the tests and shall provide all facilities for the Engineer to inspect the work previous, during or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense, make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all the necessary equipment and facilities and shall make the tests as outlined herein.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division W) shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS.

DIVISION W, VENTURI METERS.

General.

(W1) The Contractor shall furnish the Venturi meter tubes, recording apparatus and miscellaneous equipment specified herein to operate on sewage and on air of the type and pattern made by the Builders Iron Foundry or equal.

Meters on Sewage.

No. Wanted	Diameter in Inches Inlet	Throat	Flow Expected Gallons per Day
1	24	12	2,500,000 to 13,000,000
4	12	5	600,000 to 1,700,000

Meters on Air.

No. Wanted	Diameter in Inches Inlet	Throat	Air Pressure Lb. per Sq.In.	Flow Expected Cu. Ft. per Min.
1	24	12	6.5	3,000 to 9,000
1	10	5	6.5	750 to 2,100
1	10	5	8.5	750 to 2,100
4	10	4	6.5	300 to 1,200
2	4	2	6.5	75 to 400
3	4	1⅝	6.5	50 to 300

Under the heading "flow expected" is stated the probable flow expected during operation. This shall not be taken as the capacity of the meter, but meters shall be furnished with the inlet and throat sizes given, which have a capacity actually larger than the flow expected.

The sewage meters shall be of a special type designed to operate on sewage and water containing trash.

The air meters will be operated on air filtered through muslin at average air pressures approximately as given in the table.

The sewage meters, air meters and all recording apparatus shall be made up, complete, and furnished with all parts specified, ready for erection. The specifications are intended to cover complete equipment. It is not the intent to give every detail in the plans and specifications.

Sewage Meter Tubes.

(W2) The 24x12 inch meter tube shall be of cast iron of quality and thickness corresponding to at least Class A pipe, American Water Works Association standard, and shall have spigot ends suitable for laying with Class A pipe. The inlet meter shall be 24 inches in diameter, the throat 12 inches in diameter and the outlet 24 inches in diameter, with an overall length of 16 feet 10 inches. All joints shall be flanged except the outlet end, which shall have a spigot end. The throat shall have a bronze lining, bored to the proper inside diameter, which shall form the inner wall of the pressure chamber and through which the vent holes shall be drilled. The up-stream chamber shall also be lined with brass or shall have the vent holes bushed with brass pipe, iron pipe size. The pressure chambers shall be fitted with hand holes and special vent cleaning devices. The design shall be such that the cleaners will not only clean the vent holes, but at the same operation will close all communications between the pressure chambers and the interior of the pipe. The vent holes shall be dressed flush on the inside, shall have sharp edges and shall be at right angles to the axes of the tube.

The 12x5 inch meter tube shall be of similar construction to the 24x12 inch meter tubes, modified in so far as the size may require. The ends shall be flanged with an overall length of nine (9) feet eleven (11) inches.

Suitable taps shall be made, with wrought iron pipe threads, for the connections to the float tubes, also for drainage and flushing. Hand holes shall also be provided.

Air Meter Tubes.

(W3) The air meter tubes shall be furnished of the sizes indicated for inlet and throat, the outlet to be of the same size as the inlet. These meters shall all be furnished with flanged ends. The meter tubes shall be of cast iron of quality and thickness corresponding to at least Class A pipe, American Water Work Association standard. All flanged ends shall be faced and drilled to the American standard drilling.

The joint at the throat and one joint on either side of and next to the throat joint shall be flanged. The throat shall have a bronze lining bored to the proper inside diameter which shall form the inner wall of the pressure chamber and through which the vent holes shall be drilled. The upstream chamber shall also be lined with brass.

Suitable taps shall be made, with wrought iron pipe thread, for the connections to the recording instruments.

Recording Apparatus, Sewage Meters.

(W4) The recording apparatus furnished with the sewage meters shall be of the float controlled type. Furnished with each meter shall be a complete equipment of two (2) copper floats each eight (8) inches in diameter, the pulley framing or yokes of the top of the two (2) float tubes, each ten (10) inches internal diameter, and the necessary flexible cord of a non-corrosive metal.

For all the sewage meters, the registers shall be that known as the Type M Register-Indicator-Recorder. Three dials shall be furnished with each register, one to indicate the momentary rate of flow, one to record this rate accurately and continuously in ink on a chart in million gallons per 24 hours and one to show the total gallons pumped. The indicator dial shall be at least ten (10) inches in diameter, graduated to show as fine divisions on as open a scale as possible. The dial shall be machine engraved on metal, silver plated, with the graduations in black enamel. The charts shall be at least 11 inches in diameter, of the circular type, making one revolution in twenty-four hours, and shall be lettered in accordance with the instructions furnished by the Engineer. All dials of the totaling counter shall

be graduated in a clock-wise direction. The entire records of all three dials shall be completely visible from the front of the machine. The registering apparatus shall not require to be wound more than once in seven days.

Recording Apparatus, Air Meters.

(W5) The recording apparatus furnished with the air meters shall be of the pressure controlled type, suitable for light pressures. One recording apparatus, complete, shall be furnished with each meter as specified herein. For the 24x12 air meter and the 10x5 air meter, operating at 8.5 pounds pressure, the registers shall be those known as the Type QS Register-Indicator-Recorder. The three dials and charts shall be as specified in Section W4, in so far as it may apply, except that the dials and charts shall record cubic feet of air instead of gallons. In addition, the Type QS register shall be equipped with manometer tubes connected to the oil in the pressure chambers.

For the 10x5 air meter operating at 6.5 pounds pressure, and the four (4) 10x4 air meters, the registers shall be those known as the Type S Indicator-Recorder. Two dials shall be furnished with each register, one to indicate the momentary rate of flow, one to record this rate accurately and continuously in ink on a chart in cubic feet. Otherwise the Type S Indicator-Recorder shall be as specified for the Type QS.

With each recording apparatus shall be furnished a sufficiently special oil for the installation.

Manometer Air Meters.

(W6) For use on the two 4x2 and the three 4x1⅝ air meters shall be furnished five (5) U-tube manometer equipments, complete, with graduated metal scale, nickeled fittings and board, designed to fasten to the wall. The connections shall be threaded with a standard wrought iron pipe thread.

Supplies.

(W7) The Contractor shall provide for each recording apparatus a neat cabinet containing all necessary wrenches, tools and accessories for handy use. In addition, the Contractor shall furnish one year's supply of pens, ink and charts for each recorder.

The Contractor shall furnish one (1) special planimeter, with aluminum disc, suitable for use with all the charts on both air and water. They shall be furnished in a neat wooden box.

The Contractor shall also furnish the test constants for the sewage meters and tables or diagrams of corrections for the air meters, showing the correction in the volume of air for various ranges of temperature and pressure to which the meters will be exposed. In general all the charts shall be based on a pressure of six (6) pounds per square inch except for the 10x5 air meter, operating nominally at 8.5 lb. per sq. in., which shall have its chart worked up at eight (8) pounds per square inch. The range of temperature expected may be between 40 and 120 deg. Fahr. A table or diagram shall be furnished for the meters equipped with manometers, giving the volumes of air for various differences of elevation in the water columns, with the corrections for pressure and temperature.

Painting.

(W8) The cast iron work on all meter tubes shall be dipped, as specified for pipe, in the latest American Water Works Association standard specification or shall be painted hot with an approved coating. The registers shall be filled and rubbed and painted with two (2) coats of enamel paint of a color and make to be approved by the Engineer.

Superintendence.

(W9) The Contractor shall furnish, at his own expense, when notified by the Chief Engineer, a competent superintending engineer for a period not to exceed six (6) working days to check up the erection, adjust the apparatus and instruct the engineers designated by the Sanitary District in the adjustments and use.

Transportation and Delivery.

(W10) The Venturi meters and appurtenances furnished hereunder shall be delivered by the Contractor, at his own risk, f. o. b. cars, on the Chicago and Northwestern Railroad, Maywood, Ill., consigned to the contractor designated by the Chief Engineer.

The meter tubes shall be shipped as soon as possible after the approval of the bond by the Board of Trustees of the Sanitary District. The recording and indicating apparatus, with appurtenances, shall be delivered within the time specified in Article 27.

Guarantee.

(W11) All equipment furnished hereunder shall be guaranteed free from mechanical defects in workmanship, design and materials, and the Contractor shall replace, without cost to the Sanitary District, any part or parts proving defective within one (1) year after the equipment has been placed in operation, in accordance with the maintenance bond for this purpose specified under Article 34.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer notwithstanding any minor omissions in the specifications or drawings.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary, either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actu-

al cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Divisions C, N, O, P, R, V, W, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon ap-

proximate estimates, shall be subject to the correction of the final certificate.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employes, that is in the nature of a legal liability, and he hereby agrees to indemnity and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employes; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912;" approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District

will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in, or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division W hereby agrees to deliver the meter tubes to the railroad within one hundred and twenty (120) calendar days from the said date of the approval of the bond, and to deliver the recording and registering apparatus within two hundred and seventy (270) calendar days from said date of approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago & North-Western Railway, Maywood, Illinois.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any con-

tractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division W within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Ten Dollars ($10.00) for Division W for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States Government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes

of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract—Division W.

Art. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same, or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof, and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, machinery or equipment as the said Contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor, or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 34. Division W. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Art. 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all

the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION W.

Venturi Meters.

For furnishing and delivery, complete, of the Venturi meters for sewage and air, together with recording and indicating apparatus, and miscellaneous appurtenances, complete, as specified f. o. b. cars, the Chicago & North-Western Railway, Maywood, Ill., the lump sum of Twelve Thousand, Seven Hundred Sixty Dollars ($12,760.00).

The foregoing price shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said price shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 36. Division W. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed Eighty-seven and One-half (87½) Per Cent of the value of the work properly performed under this contract, and that the remaining Twelve and One-half (12½) Per Cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided, however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. & N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may

have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its Treasurer, to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Finance Committee.
Attest:
John McGillen,
Clerk.
(Seal)
Builders Iron Foundry. (Seal)
By Z. Chafer,
Treasurer.
Attest:
H. Chafer,
Secretary.
Approved May 6, 1919:
H. I. Steffa,
Mechanical Engineer.
Langdon Pearse,
Sanitary Engineer.
G. M. Wisner,
Chief Engineer.
Chas. E. Anthony,
Asst. Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Builders Iron Foundry as principal and American Surety Company of New York as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of six thousand three hundred eighty dollars and no cents ($6,380.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this sixth day of May, A. D. 1919.

The Condition of the Above Obligation Is Such, That whereas, the above bounden Builders Iron Foundry has entered into a certain contract with The Sanitary District of Chicago, bearing date the 6th day of May, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing and delivering of Venturi meters, including miscellaneous sewage and air Venturi meters, with recording and indicating apparatus f. o. b. cars, The Chicago & North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division W of the attached contract.

Now, If the said Builders Iron Foundry shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Builders Iron Foundry, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and, moreover, shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services, and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course

of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Builders Iron Foundry in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Builders Iron Foundry, or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Builders Iron Foundry shall be conclusive against each and all parties to this obligation as to amount, liability and all other things pertaining thereto.

Builders Iron Foundry. (Seal)
By Z. Chafer,
Treasurer.

American Surety Company of New York. (Seal)
By H. E. Davis,
Resident Vice-president.

Attest:
Raymond Buss,
Resident Asst. Secretary.

Approved as to Form May 6, A. D. 1919:
Chas. E. Anthony,
Asst. Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Finance reports that it has examined and approved the bond of the W. A. Jackson Company with the Southern Surety Company thereon as surety, on its contract for furnishing and delivering electrical equipment for the Desplaines River Sewage Treatment Works, designated as Division "P" of the specifications, for The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the W. A. Jackson Company for the faithful performance of the contract above specified, said bond being in the penal sum of $11,-187.50 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
Jas. H. Lawley,
Chairman.
Matt A. Mueller,
Willis O. Nance,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond of the W. A. Jackson Company:

The Sanitary District of Chicago.

CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

This Agreement, Made and entered into this first day of May, A. D. 1919,

by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the W. A. Jackson Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering the electrical equipment, and the apparatus, equipment and appurtenances thereto, as called for under Division P of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work as contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which, in his opinion, do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor, that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division P, of the Desplaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the electrical equipment, including motors and accessories, transformers, controlling apparatus, switches, switchboards, and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Desplaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Desplaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing and delivering f. o. b. cars, the C. & N. W. Ry., Maywood, Ill., the following:

Division P. Electrical equipment, including three (3) vertical shaft, squirrel cage induction motors, each 50 H.P.; four (4) horizontal shaft, slip-ring, wound rotor motors, each 150 H.P.; two (2) horizontal shaft, squirrel cage induction motors, comprising one (1) at 75 H.P. and one (1) at 30 H.P.; four (4) 300 K.V.A. transformers, oil switch equipment, and miscellaneous appurtenances.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

Division P.

Electric motors.
Switchboard equipment.
Transformers.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size,

location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Foundations.

(6) The foundations for all equipment included under Division P of this contract will be furnished by the contractor for Division A. These foundations will be brought up to within about one (1) inch of their final elevation. After placing equipment thereon, the contractor erecting said equipment shall shim the same to the final elevation, using for this purpose approved metal wedges, and complete the foundation by grouting under and around the bases of the equipment.

Shop Tests.

(8) Each motor shall be tested in the shop for efficiency, insulation and operating characteristics, except as hereinafter specified.

All tests shall be made in the presence of the Engineer. The Contractor, at his own expense, shall supply in place and ready to use, all necessary power, apparatus, wiring, piping and instruments, and shall make the tests, and shall provide all facilities for the Engineer to inspect the work previous, during, or subsequent to the test and to calibrate and otherwise check all the instruments used in the tests.

Should the above tests and inspections show any failure on the part of any of the equipment to fulfill the requirements of these specifications, the Contractor shall forthwith, at his own expense, make such changes and repairs to the equipment as may be necessary to make the same conform to the specifications before shipment to the site of the work, and shall again provide all the necessary equipment and facilities and shall make the tests as outlined herein.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division P) shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS.

DIVISION P, ELECTRICAL EQUIPMENT.

Scope.

(P1) The equipment to be furnished hereunder includes three (3) vertical shaft, squirrel cage induction motors with complete starting and control equipment; four (4) horizontal shaft, slip ring, wound-rotor and two (2) horizontal shaft, squirrel cage induction motors, complete, with starting and control equipment; four (4) 300 K. V. A. step-down transformers; three (3) 15,000 volt, 300 ampere, 3-pole, single throw, automatic oil switches with current transformers and relays; one (1) 4,500 volt, 1,500 ampere, 3 pole, single throw automatic oil switch with current transformers and relays; three (3) 2,500 volt, 200 ampere, 3 pole, single throw, automatic oil switches with current transformers; two (2) 15,000 volt current transformers; three (3) 2,500 volt current transformers; four (4) 11,000/110 volt potential transformers and four (4) 5 KVA. step-down transformers.

The electrical energy for the operation of the station will be supplied from a hydro-electric power plant having a maximum generating capacity of 32,000 KVA. over a 60 cycle transmission system consisting of step-up transformers, thirty (30) miles of 44,000 volt overhead transmission line consisting of three (3) circuits, step-down transformers and nine (9) miles of 12,000 volt transmission line. The 44,000 volt line consists of three circuits supported on one line of steel towers. The three conductors of each circuit consists of 270,000 circular mil aluminum cables arranged in the form of an equilateral triangle. The spacing between conductors is approximately six (6) feet. Each 44,000 volt circuit is protected at the power plant end by an automatic oil switch. These circuits terminate in a "Terminal Station" where the energy is stepped down to 12,000 volts and from which the 12,000 volt lines radiate. The step-down transformers at the Terminal Station are protected on both primary and secondary side by automatic oil switches and the 12,000 volt line leaving the Terminal Station is also protected by an automatic oil switch. The 12,000 volt line from the Terminal Station to the Desplaines Sewage Treatment Works will consist of five (5) miles of three conductor, lead covered cable connecting to a substation bus through an automatic oil switch and four (4) miles of overhead line from this substation bus through an automatic oil switch to the Desplaines Sewage Treatment Works. The underground cable is Number 4/0 and the overhead conductors are No. 1 B & S gauge copper. The conductors on the overhead circuit are spaced two (2) feet apart at the corners of an equilateral triangle.

Specifications and Plans.

(P2) The specifications and plans are intended to cover complete equipment. It is not the intent to give every detail in the plans and specifications. The Sanitary District will not be responsible for the absence of any detail the Contractor may require, or for any special construction which may be found necessary as the work progresses. No additional compensation will be allowed for material or labor used in performing any work hereunder, unless the work can be clearly shown to be beyond the intent and scope of the plans and specifications, to the satisfaction of the Chief Engineer.

Materials.

(P3) Any materials for which no detailed specification is given herein shall be of the quality and character best adapted for the purpose for which they are to be used. No material shall be used for any purpose for which it has not previously been in use for a like purpose for a sufficient length of time to demonstrate its probable success for the purpose for which it is to be used.

The various materials called for, including cast iron, cast steel, carbon and alloyed steel forgings, steel, copper and manganese bronze castings and rods, shall conform in general to the composition, physical characteristics and methods of treatment specified in the latest standard specifications of the American Society of Testing Materials, so far as they may apply. With the written permission of the Chief Engineer, substitution of materials equally good and well adapted for the purpose proposed may be allowed, if there is difficulty in obtaining metals usually employed for electrical machinery owing to conditions produced by the war.

Replacements.

(P4) The Contractor shall make the individual pieces of the machinery herein specified to be furnished in duplicate or triplicate to conform to exact dimensions on the working drawings made by the Contractor, so that no fitting or adjusting will be necessary in setting up the entire machine, other than such as is usually done in high-grade standard designed apparatus. This requirement will be rigidly enforced, as it is essential that any defective piece of the machinery may be easily replaced by a new piece made in accordance with the drawings.

Castings, Bolts and Nuts.

(P5) All castings shall be free from blow-holes, shrinkage strains, cold shuts and like defects, and shall be smooth, true to form and of accurate dimensions.

All seats for bolt heads and nuts shall be spot-faced. Case hardened nuts shall be used on all covers, bonnets, pedestals and other parts requiring frequent removal or adjustment.

Eye bolts for all heavy parts requiring removal shall be furnished.

INDUCTION MOTORS FOR PUMPS.

Number, Type and Capacity.

(P6) Three (3) 50 horsepower, 440 volt, three-phase, sixty cycle, vertical shaft, squirrel cage, induction motors

are required for driving the centrifugal sewage pumps. The motors will be direct-connected to their respective pumps through a flexible coupling to be furnished by the pump contractor. The Contractor under Division P shall bore and keyway the motor end of each coupling, and drive it in place on its shaft, and furnish and place the key.

Speed.

(P7) The synchronous speed of these 50 horsepower motors shall be four hundred (400) R.P.M. The pump capacities are based on full load speed of the motors approximately six (6) per cent below synchronism and it is desired that the full load slip of the motors shall not exceed this amount.

Base and Frame.

(P8) The base and frame of the motors shall be properly designed and constructed to support and distribute the stresses placed upon them and shall be provided with large openings to permit free circulation of air through the core and windings.

Magnetic Circuits.

(P9) The stator and rotor cores shall be built up of thin sheet iron or steel laminations, properly insulated to prevent excessive eddy current losses. Slots of the open type shall be provided to receive the windings and the windings shall be held in the slots by means of fibre or wooden wedges. Ventilating ducts shall be provided in both stator and rotor core to allow free circulation of air for cooling purposes. The laminations shall be clamped and rigidly held in place in an approved manner.

Windings.

(P10) The windings shall consist of conductors composed of copper or other suitable material of proper size thoroughly insulated in an approved manner. Attention is called to the fact that these motors will operate in a room subject to considerable moisture and wide variation of temperatures and the insulation used must be thoroughly impregnated or otherwise treated to withstand such conditions without deterioration or damage.

The stator windings shall consist of form wound coils held in the core slots by means of suitable separators so as to permit free circulation of air around all coils and shall be protected by approved metal shields fastened to the frame or in some other approved manner.

The rotor windings shall consist of insulated bars imbedded in the slots of the rotor core and welded, brazed or bolted at the ends to short-circuiting rings. The method used in making the connection between the rotor bars and the short-circuiting rings must be such as will insure against separation due to mechanical causes.

Rotor Spider.

(P11) The rotor core shall be supported in a proper manner on a cast iron or cast steel spider which shall be mounted on and keyed to the shaft in an approved manner. The spider shall be properly designed to withstand all strains to which it may be subjected.

Bearings.

(P12) The bearings of each motor shall consist of a thrust bearing of the surface type (not ball bearings) above and a suitable guide bearing below the stator frame. These bearings shall both be provided with suitable oil gauges.

The guide bearing shall be self-oiling, either by means of an oil pump geared to the shaft or by the centrifugal action of the rotating elements, and shall be of a design to prevent oil getting into the windings.

The thrust bearing shall run in oil and shall preferably be submerged at all times. This bearing shall be of a type which has proven satisfactory for similar service and which will be easy of repairs and adjustments. This bearing shall be protected by an approved housing.

Starting and Control Equipment.

(P13) There shall be provided with each motor complete starting and control equipment consisting of two push botton control switches, starting compensator, solenoid or motor operated carbon break switches with complete protective devices. The equipment furnished shall be equal in every respect to equipment manufactured by the Cutler-Hammer Manufacturing Company for such service. One of the push button control switches shall be mounted on the starting panel and the other in a condulet or other conduit fitting to be installed near the motor. These switches are to be of a type such that the motor may be started or stopped at either the switchboard panel or at a point near the motor. The starting equipment is to be so designed and furnished that these push button control switches may be replaced by a float control switch for the

complete automatic operations of the pump motor.

The starting equipment for each motor shall consist of auto-transformer or compensator and solenoid or motor operated carbon break switches mounted on a black Monson slate panel. It is estimated that fifty starts per day will be made under normal conditions and the switches and other equipment shall be properly designed for such service. Each starting and control equipment shall include complete overload, phase failure and phase reversal protective devices of an approved type, designed to automatically disconnect the motor in case of overload, short circuit, failure of any phase, reversal of any phase or excessive drop in line voltage.

All starting and control equipment for each motor, except one push button switch, shall be mounted on a black Monson slate panel two (2) inches thick and sixty-two (62) inches high with three-eighths (3/8) inch bevel on all front edges, rubbed to a smooth finish. Each of these panels shall consist of a lower section twenty-eight (28) inches high and an upper section thirty-four (34) inches high.

The starting compensator or auto-transformer shall be mounted on the back of the panel, not to extend above the top of the panel. All other equipment shall be mounted on the front of the panel and all connections made between the various parts of the equipment. These panels will be mounted as part of the main switchboard under another contract. They shall be furnished by the Contractor for Division P with all equipment in place and drilled for mounting as indicated on drawing to be furnished by the Sanitary District. All holes shall be drilled straight and clean by counter boring from both sides and shall be perpendicular to the face of the panel and of proper size for the stud, bolt or wire passing through same. Any panels showing chipping or cracking of the slate around the holes may be rejected.

Starting Load.

(P14) The starting load on the motors will consist of the friction of the pump and shafting and the water load of the pump. The water load will be nil at rest and will be somewhat below the rated load of the motor at full speed and will vary in proportion to the cube of the speed. The weight of the rotating parts outside of the motor will be 3,600 pounds for the 50 H.P. motors and will act on a sliding bearing, of which the mean radius of gyration is 6.

INDUCTION MOTORS FOR BLOWERS.

Number, Type and Capacity.

(P15) Four (4) 150 H.P., one (1) 75 H.P. and one (1) 30 H.P., 440 volt, three phase, sixty cycle, horizontal shaft induction motors are required for driving Hydro-Turbine Blowers. The 150 H.P. motors shall be of the slip ring, wound-rotor type and the 75 H.P. and 30 H.P. motors of the squirrel cage type. The motors will be connected to their respective blowers through a silent-chain to be furnished, together with the gears or pinions for both ends, by the blower contractor under Division R. The shaft of each motor shall extend beyond the motor-frame bearing to the proper length for the installation of these gears or pinions, and shall be keyed as ordered by the Engineer. The Contractor under Division P shall bore and keyway each gear or pinion to size and drive it in place on its shaft, and furnish and place the key.

Each motor shall be arranged for conduit wiring. The side of the frame on which the leads are to be brought out will be determined by the Sanitary District. This information will be furnished to the Contractor as soon as reasonably possible after this contract has been signed.

Complete starting and control-equipment for each motor shall be furnished with the motors. The motors are to be used for constant speed service on either continuous or intermittent duty.

The motors and starting and control equipment shall be equal in every respect to similar equipment manufactured by the General Electric Company or by the Westinghouse Electric and Manufacturing Company.

Speed.

(P16) The synchronous speed of each motor shall be 600 r.p.m. for the 150 H.P. and 900 r.p.m. for the 75 H.P. The full load speeds shall be approximately 575 r.p.m. for the 150 H.P. motor and 870 r.p.m. for the 75 H.P. and 30 H.P. motors.

Base and Frame.

(P17) The base and frame of the motors shall be designed and constructed to support and distribute the stresses placed upon them and to give proper ventilation. A sliding base, complete,

shall be furnished with each motor. Motors of the three (3) bearing type are required on the motors of 150 H.P. and 75 H.P. size.

Starting and Control Equipment.

(P18) There shall be provided with each motor a complete starting and control equipment. For the 150 H.P. motors the starting and control equipment shall consist of a drum controller with the necessary resistors for the control of the secondary circuit, not less than two 5 ampere secondary current transformers, an ammeter, an oil switch with operating handle with overload and low voltage release trip coils and a black Monson slate panel with 3/8 inch bevel on front edges. The entire equipment, with the possible exception of the resistors which may be mounted below floor if necessary, shall be assembled as a unit on angle iron or one and one quarter (1¼) inch iron pipe frame for installation near the motor. An interlock shall be provided such that the oil switch can not be closed unless the controller is in such position that all of the resistance is in the motor circuit. For the 30 H.P. and 75 H.P. motors the starting and control equipment shall consist of a starting compensator with overload relays, no voltage release and an ammeter. The compensator with overload relay and ammeter panel and wiring case for conduit wiring shall be made as a complete unit. The compensator shall have an oil immersed switch and with the lever in the "off position" both the compensator and motor windings shall be disconnected from the line.

POWER TRANSFORMERS.

General.

(P19) Four (4) 300 K.V.A., 12,000/220-440 volt, 60 cycle, single phase, oil insulated, self-cooled, indoor type transformers are required for supplying power and lighting for the operation of the station. These transformers will be arranged in one bank of three (3) transformers and one spare unit. The bank of three transformers to be connected in delta on both primary and secondary side.

The primary winding shall be provided with full capacity taps for operation at 11,400 volts and 10,800 volts.

These transformers will be subject to surges and operating conditions usually encountered in a long distance transmission system and will be installed in a room subject to considerable moisture, and special attention must be given to the design to insure satisfactory operation under such conditions.

Core.

(P20) The core shall be built up of thin laminations of the best grade of silicon steel especially adapted to this purpose. The laminations shall be properly insulated to prevent excessive eddy current losses and shall be mounted securely in a heavy iron frame. The construction shall be such that the laminations cannot vibrate or become loose and that no bolts or rivets pass through the laminations. Suitable ventilating ducts shall be provided through the core to allow free circulation of oil.

Windings.

(P21) The windings shall consist of coils thoroughly impregnated with an insulating compound by means of the vacuum process. The insulation used shall conform to the requirements of Class A or Class B insulation as specified in Table III of the 1916 issue of the Standardization Rules of the American Institute of Electrical Engineers and shall withstand the temperatures given in said table as permissible for insulation of the class used without injury. Extra insulation shall be provided on the end turns of all windings to insure against breakdown due to surges. The coils shall be separated by suitable spacers to allow free circulation of oil between the coils and shall be rigidly and securely braced to prevent any shifting on the core or distortion of the coils from any cause. Particular attention shall be given to this detail of construction.

Cases.

(P22) Each transformer shall be mounted in a suitable case, composed of a heavy boiler plate or sheet steel tank with welded joints, mounted on a heavy cast iron or structural steel base and fitted with a cast iron cover with gaskets. All joints must be thoroughly tight to prevent any leakage of oil or air.

Each tank shall be provided with a thermometer and an electric alarm attachment for warning of high temperatures and also with an oil gauge and drain cock and with a pet cock for drawing off oil samples.

Suitable bushings shall be mounted in the cover for bringing out the leads from the terminal boards and windings.

These bushings shall be securely held in place and shall be of heavy and suitable construction and shall be mounted in the cover in a manner to prevent any air or moisture entering or leaving the case at this point. Eye bolts shall be provided for lifting the cover and also for lifting the complete transformer and case, and for removing the transformer from the case.

Terminal Boards and Terminals.

(P23) All leads shall be brought to suitable terminal boards mounted inside the transformer case below the oil level. Strap connections shall be provided for obtaining the different voltages specified. Leads shall be provided from the terminal boards through bushings in the cover for outside connections for each winding. These leads shall consist of copper tubing or rod of proper size and stiffness provided with a suitable union for connection to outside circuits.

Oil.

(P24) A sufficient quantity of the best grade of transformer oil shall be furnished with each transformer. The oil shall withstand a dielectric test between one-half inch spheres spaced two-tenths of an inch apart of forty thousand (40,000) volts A. C. at 60 cycles and a flash test of one hundred and twenty-five (125) degrees Centigrade.

Diagrams.

(P25) Diagrams showing connections to be made for obtaining the different voltages shall be attached to the cover or tank and properly protected so as to remain clear and distinct at all times.

Name Plate.

(P26) Each transformer shall be provided with a suitable name plate, mounted on the outside of tank, giving the capacity in K.V.A., the voltages obtainable, the frequency and the primary and secondary full load current.

OIL SWITCHES.

General.

(P27) The following oil switches are required:

Three (3) 3-pole, single-throw, 300 ampere, 15,000 volt, hand operated, remote control, automatic oil switches for the two (2) 12,000 volt lines and the high-tension side of the 900 K.V.A. transformer bank.

One (1) three-pole, single throw, 1,500 ampere, 4,500 volt, hand operated remote control, automatic oil switch for the low side of the 900 K.V.A. transformer bank.

Three (3) three-pole, single throw, 200 ampere, 2,500 volt, hand operated, remote control, automatic oil switches for the 440 volt feeders.

The three (3) 300 ampere, 15,000 volt switches furnished shall be equal in every respect to type F, Form K-12, General Electric oil switches or to type F-3, Westinghouse oil circuit breakers. The one (1) 1,500 ampere, 4,500 volt switch shall be equal in every respect to type F, Form K-12B, General Electric oil switch or to type B-2 Westinghouse oil circuit breaker. The three (3) 200 ampere, 2,500 volt switches shall be equal in every respect to Type F, Form K-13, General Electric oil switches or to Type F-1, Westinghouse oil circuit breakers.

Type.

(P28) These oil switches shall be of the hand operated, remote control, gravity opening type arranged for mounting on one and one-quarter (1¼) inch iron pipe frame in basement, the floor elevation of which is approximately thirteen (13) feet below the main or switchboard floor elevation as shown on drawing Sheets Q-2 and Q-3 for Desplaines Sewage Treatment Works. All switches are to be operated by bell cranks and operating rods from handles mounted on the switchboard. The necessary bell cranks, operating handles and face plates complete with trip coils shall be furnished with the oil switches. The bell cranks shall be such that they may be arranged to put all operating rods in tension for the closing of the oil switches.

Capacity.

(P29) All oil switches shall be ample and safe for protecting and rupturing their circuits in normal operation or on repeated short circuits when connected as shown on wiring diagram, Sheet Q-1 for Desplaines Sewage Treatment Works and connected to transmission lines and generating station as stated under Section P1.

Contacts.

(P30) The main contacts must be designed to carry the rated current continuously and to extinguish the arc on opening or closing of the switch without damage to any part of the switch under any and all conditions which may arise. The contacts and all connections which may be subjected to high potentials must be entirely submerged in oil.

Leads.

(P31) The leads of the switch shall be brought out at the top of the switch through porcelain or other insulating bushings and shall consist of copper or brass rods of proper sizes terminated at the upper end with copper or brass unions for making connections. Porcelain or other insulating sleeves shall be provided for covering the terminals. The leads must be insulated in a manner to prevent syphoning of oil from the tanks and must be securely connected to the contacts of the switch below the oil level.

Oil Tanks.

(P32) The oil tanks shall be constructed of heavy sheet metal, lined with a suitable insulating material. All seams shall be double lapped and riveted or welded to insure against leakage. All leaky tanks must be removed promptly and new tight tanks supplied by the Contractor at his expense. The tanks shall be supported from the switch frame and shall be readily removable for inspection and repairs. Each tank shall be marked to show the proper level at which the oil should be maintained and must be so designed that the oil level may vary throughout a range of two and one-half (2½) inches without affecting the operation of the breaker.

Trip Coils and Auxiliary Switches.

(P33) Each of the three (3) 300 ampere, 15,000 volt oil switches and the 1,500 ampere, 4,500 volt oil switch shall be equipped with A. C. overload trip coils to be energized through a circuit closing relay from the secondary of the current transformers. The trip mechanism is to be equal in every respect to the "Direct Trip Attachment" as manufactured by the Westinghouse Electric and Manufacturing Company. Each of the three (3) 200 ampere, 2,500 volt oil switches shall be equipped with at least two A. C. overload trip coils to be energized from the secondary of the current transformers and with a low voltage release. The necessary current transformers for the complete automatic operation shall be furnished for each of the seven oil switches.

Each of the seven oil switches shall be equipped with auxiliary switches for the operation of red and green A. C. indicating lamps and for the closing of a 110 volt A. C. circuit through a bell alarm relay upon the automatic opening of the oil switches.

Current Transformers.

(P34) The current transformers for the automatic operation of the 15,000 volt oil switches shall have a primary current rating of fifty (50) amperes, a secondary current rating of five (5) amperes, a capacity of not less than forty-five (45) volt-amperes and a voltage rating of not less than 15,000 volts. The current transformers for the automatic operation of the 4,500 volt, 1,500 ampere oil switch shall have a primary current rating of twelve hundred (1,200) amperes, a secondary current rating of five (5) amperes, a capacity of not less than forty-five (45) volt-amperes and a voltage rating of not less than 2,500 volts. The current transformers for the automatic operation of the oil switches for the 440-volt feeders shall have a secondary current rating of five amperes, a capacity of not less than forty-five (45) volt-amperes, a voltage rating of not less than 2,500 volts and primary current rating of sixty (60) amperes for feeder No. 1, forty (40) amperes for feeder No. 2 and twenty (20) amperes for feeder No. 3. At least two (2) current transformers shall be furnished for each oil switch. The 15,000 volt current transformers shall be equal in every respect to General Electric Type K-48 or Westinghouse Type K-B and 2,500 volt current transformers to General Electric Type W-2 or W-5 or Westinghouse Type K-A current transformers.

All current transformers shall be provided with mounting feet, designed to be supported on a base of one and one-quarter (1¼) inch iron pipe or structural steel.

Relays.

(P35) The overload relays required for the operation of the oil switches shall be of the circuit closing, time-limit, induction type equal in every respect to the General Electric Type I R or Westinghouse Type C O. At least two (2) relays shall be provided for each of four (4) oil switches. There shall also be provided with each oil switch a circuit closing control relay for closing the circuit through the trip coil of the oil switch.

Oil.

(P36) There shall be furnished for each oil circuit breaker a sufficient quantity of the best quality of oil having high flash and ignition points and low carbonizing properties. Before being put in the tanks the oil shall be thoroughly

dried and free from dirt or other foreign matter and shall have a high breakdown value.

Lighting Transformers.

(P37) Four (4) 5 K.V.A., 440 to 110-220 volt, single phase transformers shall be furnished for the 110 volt lighting service. These transformers shall be equal in every respect to similar equipment manufactured by the General Electric Company or the Westinghouse Electric and Manufacturing Company.

Current and Potential Transformers.

(P38) Four (4) 200 watt, 11,000 to 110 volt, oil insulated potential transformers with primary fuses, fuse holders and separate mountings, two (2) 40 to 5 ampere, 15,000 volt, 45 volt-ampere and three (3) 120 to 5 ampere, 2,500 volt, 45 volt-ampere current transformers shall be furnished for the operation of switchboard instruments. These current and potential transformers furnished hereunder shall be equal in every respect to similar equipment manufactured by the General Electric Company or by the Westinghouse Electric and Manufacturing Company. The potential transformer fuse mountings shall be front connected, equal in all respects to Delta Star Catalog No. 37250 and fitted with S. & C. fuses.

Oil.

(P39) The Contractor shall furnish a sufficient quantity of best grade transformer oil for all power, lighting and potential transformers, and a sufficient quantity of high grade lubricating oil for all bearings of equipment supplied hereunder.

SHOP ERECTION AND TESTS.

General.

(P40) All the equipment furnished hereunder shall be assembled, erected and completely tested in the shops of manufacturer to determine the operating characteristics and also to determine whether or not the equipment meets all of the requirements of the specifications and contract.

A. I. E. E. Rules.

(P41) All tests shall be conducted in accordance with the recommendations embodied in the Standardization Rules of the American Institute of Electrical Engineers in force at the date of the contract and all calculations based upon such tests shall be made in accordance with said recommendations and Standardization Rules.

Tests to Be Made.

(P42) Tests shall be made to determine the following characteristics:

Insulation resistance and dielectric strength of motor and transformer insulation.

Efficiency, power-factor, slip, and torque of the induction motors at various loads.

Efficiency and regulation of transformers at various loads and power-factors.

Heating of transformers and motors under continuous operation at rated full load.

Expense of Tests.

(P43) The Contractor shall notify the Engineer when the equipment is ready for test so that the Engineer may have a representative present to witness the tests. All expense of conducting such tests shall be borne by the Contractor and he shall furnish all instruments and all other equipment and material required for conducting said tests.

Calibration of Instruments.

(P44) The Contractor shall, if directed to do so by the Engineer, have all instruments, instrument transformers, etc., used in making such tests, calibrated in the presence of the Engineer or his representative and shall furnish to the Engineer certified copies of any necessary correction curves or factors applying to such instruments or other equipment.

Results of Test.

(P45) Should any equipment, when tested, fail to meet any of the requirements of the specifications or the performance guarantees, due to any weakness of construction or design, the Contractor shall, at his own expense, forthwith make such changes, betterments or replacements in any equipment so that said equipment when again tested will meet the requirements of the specifications and the performance guarantees.

If, after such changes, betterments or replacements have been made to any equipment, and the results of any test on any such equipment shows that the equipment does not then meet the requirements of the specifications and the performance guarantees, then such equipment may be rejected by the Engineer

and the Contractor hereby agrees to replace the same at his own expense with new equipment, which shall be tested in the same manner as the original equipment.

In the further event that the results of any test of said second new equipment show that said equipment does not meet the requirements of the specifications and the performance guarantees, then said equipment may be rejected by the Engineer, and if installed the said Contractor hereby agrees if so ordered to at once remove the rejected equipment and said Sanitary District is hereby authorized to purchase and install at the sole cost and expense of said Contractor, such other equipment as will meet the requirements.

All changes, betterments or replacements made after the installation shall be made subject to the acceptance of the Engineer at such time and in such manner as not to interfere with the operation of the station. The Sanitary District shall have the use of the equipment as originally installed, or replaced, without charge, until such time as the changes, betterments or replacements are made. Any changes, betterments or replacements that are made in the shops shall be made to the acceptance of the Engineer.

Painting.

(P46) All equipment furnished hereunder shall be thoroughly cleaned and painted before shipment.

All exposed cast iron, steel or corrosive material of the motors shall be painted as follows: All parts shall be thoroughly cleansed with benzine and brushes. A good coat of priming shall be applied, followed by a thorough coat of good rough stuff or heavy machinery filler, rubbed to an even surface with pumice stone. The work shall then be given one (1) coat of white lead and linseed oil paint of color to be selected by the Engineer, and then one (1) coat of white lead and linseed oil paint and varnish as selected, and rubbed with powdered pumice stone. Two (2) coats of Valspar varnish or equal shall then be applied.

Transformer casings and oil switch tanks shall be painted with three (3) coats of asphaltum varnish or equal.

Paint, oil, varnish and other materials used in painting shall be of the best quality. The color of all paint and the brands of all material used shall be approved by the Engineer.

Transportation and Delivery.

(P47) All equipment furnished hereunder shall be delivered by the Contractor at his own risk f. o. b. cars, on the Chicago and Northwestern Railway, Maywood, Illinois. All equipment must be consigned to the contractor designated by the Chief Engineer.

Guarantee.

(P48) All equipment furnished hereunder shall be guaranteed free from mechanical and electrical defects in workmanship, design and materials, and the Contractor shall replace, without cost to The Sanitary District, any part or parts or any equipment proving to be defective within one (1) year after the equipment has been placed in operation. A maintenance bond for this purpose is specified under Article 34.

GENERAL CONDITIONS.

Sanitary District Law.

ARTICLE 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

ART. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Changes in Plans.

ART. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity

of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

ART. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

ART. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

ART. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Division P, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

ART. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents.

ART. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

ART. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employes, that is in the nature of a legal liability, and he hereby agrees to indem-

nify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on acount of any omission or act of said Contractor, his agents or employes; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

ART. 22. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912;" approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

ART. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

ART. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor, or by such other party or parties

agreed upon, who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

ART. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

ART. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division P hereby agrees to deliver the electrical equipment to the railroad within two hundred and seventy (270) calendar days from the said date of approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago and North-Western Railway, Maywood, Illinois.

It is understood and agreed that TIME is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

ART. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division P, within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Ten Dollars ($10.00) for Division P for each and every day that said Contractor shall be in default in the completion of said work ready for operation.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

ART. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as

may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

ART. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

ART. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Division P.

ART. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, ma-

chinery or equipment as the said contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

ART. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

ART. 34. Division P. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment less than the following:

Prices.

ART. 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION P.

ELECTRICAL EQUIPMENT.

For the furnishing and delivery complete, of the three (3) vertical type induction motors, six (6) horizontal shaft induction motors, transformers and auxiliary apparatus, with appurtenances, complete, as specified, the lump sum of Twenty-two Thousand Three Hundred Seventy-five Dollars ($22,375.00).

The Contractor hereby guarantees the efficiency of apparatus as hereinafter stated and agrees to furnish the make of apparatus hereinafter listed.

Induction Motors for Pumps.

The induction motors furnished hereunder will be manufactured by the General Electric Company at Schenectady, N. Y.

The efficiency at rated voltage and frequency including all losses will be not less than the following:

	—Per Cent Efficiency at—			
H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
50.....	79	81	84	85

The power-factor at rated voltage and frequency will be not less than the following:

	—Per Cent Power-Factor at—			
H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
50.....	40	51	64	73

The slip in per cent of Synchronous

speed will be not greater than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
	——Per Cent Slip at——			
50.....	1.75	2.5	3.75	5

The torque in foot-pounds of the induction motors furnished hereunder at rated voltage and frequency will be not less than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load	Starting	Running
	—Torque in Foot-Pounds at—					
50	163	345	508	1560		690

Induction Motors for Blowers.

The induction motors furnished hereunder will be manufactured by the General Electric Co. at Schenectady, N. Y.

The efficiency at rated voltage and frequency including all losses will be not less than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
	—Per Cent Efficiency at—			
150.....	87	89	91	91
75.....	88	90	90.5	90
30.....	87	89	89.5	88.5

The Power-factor at rated voltage and frequency will be not less than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
	—Per Cent Power-Factor at—			
150.....	57	68	79	84
75.....	72	80	87	90
30.....	65	75	84	88

The slip in per cent of synchronous speed will be not greater than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load
	——Per Cent Slip at——			
150.....	.9	1.75	2.65	3.5
75.....	1.13	2.25	3.38	4.5
30.....				4.5

The torque in foot-pounds of the induction motors furnished hereunder at rated voltage and frequency will be not less than the following:

H.P. of Motor	¼ Load	½ Load	¾ Load	Full Load	Starting	Running
	—Torque in Foot-Pounds at—					
150	337	675	1012	3300		1350
75	114	229	344	1050		458
30	46	92	137	375		183

Power Transformers.

The 300 K.V.A. transformers furnished hereunder will be manufactured by the General Electric Co. at Pittsfield, Mass.

The efficiency at rated voltage and frequency will be not less than the following:

100% P. F.	Full Load	¾ Load	½ Load
	Per Cent Efficiency at		
.....	98.2	98.3	98.1

The regulation at rated load, voltage and frequency will be not greater than the following:

Per cent regulation at 100 per cent P. F. 1.5
Per cent regulation at 80 per cent P. F. 4

The exciting current for 60 cycles will be as follows:

At normal voltage.....5%
At 110 per cent of normal voltage...8%
The per cent reactance will be.....4.75

The losses at normal rated load by wattmeter method will be as follows:

Copper losses .....3850 watts
Core losses .....1625 watts

Oil Switches.

The oil switches furnished hereunder will be as follows:

The oil switches for the two 12,000 volt lines and the high side of the transformer bank will be General Electric Co., Type K-12.

Voltage rating, 15,000.

Continuous carrying capacity in amperes per pole, 300.

Ultimate rupturing capacity in amperes per pole at 12,000 volts, 1,500.

The oil switch for the low side of the transformer bank will be General Electric Co., Type K-12-B.

Voltage rating, 4,500.

Continuous carrying capacity in amperes per pole, 1,500.

Ultimate rupturing capacity in amperes per pole at 600 volts, 37,500.

The oil switches for the 440 volt feeders will be General Electric Co., Type K-13 or K-5.

Voltage rating, 3,300 (K-5, 4,500 volts).

Continuous carrying capacity in amperes per pole, 200.

Ultimate rupturing capacity in amperes per pole at 600 volts, 12,500 (K-5, 16,000 amperes).

Instrument Transformers.

The current and potential transformers furnished hereunder will be Current, General Electric Co., Type K-48, Potential, General Electric Co., Type CE-2.

Lighting Transformers.

The 440 to 110-220 volt lighting transformer furnished hereunder will be manufactured by the General Electric Company at Pittsfield, Mass.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

ART. 36. Division P. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed Eighty-Seven and One-Half (87½) Per Cent of the value of the work properly performed under this contract, and that the remaining Twelve and One-Half (12½) Per Cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided, however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

ART. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the maner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amound of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

IN WITNESS WHEREOF, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the

party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested and its corporate seal to be hereunto affixed.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Finance Committee.
Attest:
JOHN MCGILLEN,
Clerk.
(Seal)
W. A. JACKSON CO. (Seal)
W. A. JACKSON, *President.*
Attest:
R. E. CHINLUND,
Secretary.
Approved May 8, 1919:
H. I. STEFFA,
Mechanical Engineer.
LANGDON PEARSE,
Sanitary Engineer.
F. L. BARRETT,
Architect.
G. S. BRACK,
Electrical Engineer.
G. M. WISNER,
Chief Engineer.
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, W. A. Jackson Company, as principal and Southern Surety Company as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Eleven Thousand One Hundred Eighty-seven Dollars and Fifty Cents ($11,187.50), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this first day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden W. A. Jackson Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the first day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the Furnishing and Delivering Electrical Equipment, including three (3) vertical shaft, squirrel cage induction motors, each 50 H.P.; four (4) horizontal shaft, slip ring, wound rotor motors, each 150 H.P.; two (2) horizontal shaft, squirrel cage induction motors, comprising one (1) at 75 H. P. and one (1) at 30 H. P.; four (4) 300 K.V.A. transformers, oil switch equipment and miscellaneous appurtenances, f. o. b. cars, the Chicago & Northwestern Railway, in the Village of Maywood, County of Cook, State of Illinois, as Specified Under Division P of the attached contract.

Now, if the said W. A. Jackson Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said W. A. Jackson Company, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of

employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said W. A. Jackson Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said W. A. Jackson Company or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said W. A. Jackson Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

W. A. JACKSON CO. (Seal)
W. A. JACKSON,
President.

Attest:
R. E. CHINLUND,
Secretary.

SOUTHERN SURETY COMPANY. (Seal)
By O. W. HUNCKE,
Attorney-in-Fact.

Approved as to form May 8, A. D. 1919:
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that on account of the swift current in the extension of the Main Drainage Channel below the power house it is advisable, in order to protect boats navigating therein, to construct a boom along one pier of the Elgin, Joliet & Eastern Railroad bridge which spans the channel. He further states that boats are now navigating the Main Channel and Illinois & Michigan Canal and he recommends that a boom be installed at said point at an estimated cost of $250.00 for materials and $750.00 for wages of employes of the Sanitary District in doing said work.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to have the work above specified performed, provided the total cost shall not exceed the sum of $1,000.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark,

Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering transmits herewith a form of lease wherein Augusta Schwarz leases to the Sanitary District the first floor and east half of the basement of the building known as Number 288 Canal street, in the City of Blue Island, for the term of one year from June 13, 1919, at a monthly rental of $22.00, to be used as a field office by the Engineering Department.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate, the lease above described.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting held April 24, 1919 (page 352 of the Proceedings), bids for furnishing and delivering the traveling crane for the Desplaines River Sewage Treatment Works designated as Division "N" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Bedford Foundry & Machine Company, of Bedford, Ind.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering the traveling crane for the Desplaines River Sewage Treatment Works designated as Division "N" of the contract be, and the same is hereby awarded to the Bedford Foundry & Machine Company for the lump sum price of $2,300.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by said Bedford Foundry & Machine Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the re-

spective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that on May 2, 1919, a short section of a two-foot sewer on 115th street at the west side of Prairie avenue, partially collapsed. Said sewer was built by the City of Chicago, but was rebuilt by Byrne Brothers Dredging & Engineering Company across the top of the Calumet Intercepting Sewer under its contract for the construction of Section 6 of the Calumet Intercepting Sewer.

He further states that said collapse was due to a settlement of the ground which was not detected at the time the sewer was rebuilt and was not the fault of said contractor.

He further states that it was necessary to repair said sewer at once and he employed a local sewer contractor to repair the same at an estimated cost of $200.00, and requests that his action in the premises be ratified and confirmed.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the action of the Chief Engineer in employing a local sewer contractor to perform the work above specified on the basis stated be, and the same is hereby ratified and confirmed.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Electrical Development herewith presents renewal contracts with the Universal Stamping & Manufacturing Company, 1925 South Western avenue; the Crown Stove Works, 4631 West 13th street; Illinois Show Case Works, 1735 North Ashland avenue, and Alwart Brothers Coal Company, 1854 Webster avenue, wherein they agree to take and the Sanitary District agrees to furnish electrical energy for the periods and upon the terms and conditions therein set forth. Said contracts have been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the attached contracts, which have been properly executed by said above named parties.

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, May 15, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of action taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Engineering Department—

J. X. Cohen, Assistant Engineer, $250.00 per month.

Edgar Diercks, Tracer, $130.00 per month.

Daniel Reagan, Timekeeper, $115.00 per month.

John Koenig, Bridge Tender (vacation period), $100.00 per month.

Chas. Johnson, Operator Concrete Mixer, 55c per hour.

Louis Welzien, Laborer, 45c per hour.
Thos. Kenefick, Laborer, 45c per hour.
Jos. Sullivan, Laborer, 45c per hour.
Edward Welsh, Laborer, 45c per hour.
John Thornton, Laborer, 45c per hour.
Martin Hosty, Laborer, 45c per hour.
Jerry Sweig, Laborer, 45c per hour.
Louis Cherone, Laborer, 45c per hour.
John Smith, Laborer, 45c per hour.
Thos. Riordan, Laborer, 45c per hour.
Steve Zaccone, Laborer, 45c per hour.
Aug. Suzugga, Laborer, 45c per hour.
John Murray, Laborer, 45c per hour.
James Kelly, Laborer, 45c per hour.
John Muldoon, Laborer, 45c per hour.
Jas. McCummiskey, Laborer, 45c per hour.
Dennis Martin, Laborer, 45c per hour.
Thos. Murphy, Laborer, 45c per hour.
Jos. Donohue, Laborer, 45c per hour.

Electrical Department—

Andrew F. Ryder, Operator (vacation period), $125.00 per month.

William O'Hern, Laborer, 45c per hour.

Felix Donaldson, Caulker (temporary), 80c per hour.

Law Department—

Otto Kolar, Asst. Attorney, $400.00 per month.

Willis V. Jefferson, Law Clerk, $200.00 per month.

John J. Gorman, Law Clerk, $200.00 per month.

INCREASE.

Provided for in 1919 Budget.

Engineering Department—

Chas. Hopfer, from Laborer at 45c per hour to Sub-Foreman at $5.00 per day.

REINSTATEMENTS.

Due to Honorable Discharge from U. S. Army Service.

Electrical Department—

Otto E. Elmore, Operator, $125.00 per month.

Victor Rodighiero, Laborer, 50c per hour.

Police Department—

Frank Warszynski, Patrolman (vacation period), $100.00 per month.

Engineering Department—

Chas. J. Penders, Laborer, 45c per hour.

Wm. Sullivan, Laborer, 45c per hour.

Respectfully submitted,

GEORGE W PAULLIN,
Chairman.

JAS. H. LAWLEY,
WALLACE G. CLARK,
H. E. LITTLER,
MATT A. MUELLER,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Passed and not voting—Messrs. Sergel and Nance—Two.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from the Armour Grain Company, which states that at the hearing in regard to the proposed new Twelfth street bridge held recently, it had protested against the proposed 140-foot channel, but that at the meeting of the Chicago Association of Commerce held yesterday, Mr. Pihlfeldt, City Engineer, explained how one of the abutments was to be moved back so that the plan will not interfere with navigation, and that it desired to withdraw the protest made at the original meeting.

Referred to the Committee on Engineering.

The Clerk presented a communication from the Ketler-Elliott Erection Company, which states that said company intends to erect buildings on the land leased by it from the Sanitary District on the Main Channel and that it desires to install a twelve inch tile sewer to carry sanitary sewage and clean water to the Main Channel, and requests to be informed of the proper procedure to procure permission to construct said sewer.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Nance presented the following order:

WHEREAS, The Board of Trustees of The Sanitary District of Chicago is given the right under the law to prescribe the duties of the employes of the District, and

WHEREAS, To prescribe such duties intelligently it is necessary for the Trustees to know the qualifications of the employes as ascertained by the Committee on Employment at the time such employes were placed on the payrolls of the District; therefore, be it

Ordered, That the Chairman of the Committee on Employment be, and he is hereby directed to report to the next regular meeting of the Board of Trustees the names and addresses of all employes of the District, together with their qualifications for their positions as revealed at the time of their employment and the name of the person or persons recommending such employes.

Mr. Nance moved that the order be passed.

Mr. Clark moved that the order be laid on the table.

On roll call the motion to lay on the table was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

ADJOURNMENT.

Mr. Paullin moved that the Board adjourn.

The motion prevailed.

John W. Gillson
Clerk

628.09773
C43s

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, MAY 22, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meeting of May 1, 1919, be approved as printed without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a

communication from the Electrical Engineer in which he states that it is necessary to replenish the supply of rubber coats and boots for the use of the linemen and helpers in the Electrical Department and that thirty-four pairs of boots and an equal number of rubber coats are needed for said purpose.

He further states that prices for said articles have been submitted by several dealers in rubber goods and the lowest price submitted was that of the Republic Rubber Company in the sum of $395.00, and he requests authority to purchase said coats and boots for said sum.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept the offer of the Republic Rubber Company to furnish the coats and boots above specified for the sum of $395.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

GEORGE W. PAULLIN,
MATT. A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Electrical Engineer in which he states that the storage battery belonging to the Sanitary District, which has been in service in the County Building for the past ten years, is in need of thorough overhauling. He further states that said storage battery was manufactured and installed by the Electric Storage Battery Company, and it is not practicable to obtain the necessary repair parts from any other manufacturer than said company which offers to supply the same for the sum of $894.90, f. o. b. cars at its factory in Philadelphia. Said company will not agree to install said repair parts and overhaul said battery for an agreed price, but offers to do said work on a "force account" basis.

The Chief Engineer estimates the cost of installation at the sum of $600.00 and requests that he may accept the offer of said company on the basis stated.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept the offer of the Electric Storage Battery Company to furnish the necessary repair parts and perform the work above specified, provided the total cost of the same shall not exceed the sum of $1,494.90.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it deemed it advisable to dispose of scrap material and scrap machinery that has accumulated at the terminal station at 31st street and Western avenue, and at the power house at Lockport respectively and authorized the Clerk to obtain competitive bids therefor and submit the same to your Committee.

Your Committee further reports that seven bids based on estimated quantities were received for the scrap material at the terminal station and the highest bid was that of the Eastern Metal and Refining Company in the sum of $1,650.96 and three bids on the same basis were received for the scrap machinery at the power house and the highest bid was that of the Humphrey & Sons Co. of Joliet in the sum of $346.50 and the Electrical Engineer recommends that said bids be accepted.

Your Committee having considered said matter, recommends the passage of the following order.

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to accept the bids of the Eastern Metal and Refining Company and Humphrey & Sons Company above specified on the basis stated and deliver said scrap material and scrap machinery to said respective bidders upon the receipt of the sums bid therefor.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the Village of Broadview on May 14, 1919, passed an ordinance granting the Sanitary District the right, permission and authority to enter upon, use and occupy such streets, alleys and public places within the corporate limits of said Village as the Sanitary District might deem necessary in order to construct, maintain, change, extend, reconstruct, repair and modify intercepting sewers, adjuncts and additions to its Main Channel and pumping stations, sewage treatment plants and appurtenances connected therewith.

Your Committee further reports that it has carefully examined said ordinance which has been approved by the Chief Engineer and Attorney and is of the opinion that the rights of the Sanitary District are properly safeguarded therein and said ordinance should be accepted by the Board, and therefore recommends the passage of the following order:

Ordered, That the ordinance of the Village of Broadview above specified, which is herewith transmitted to the Board, be and the same is hereby approved and accepted by The Sanitary District of Chicago, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to file with the Clerk of the said Village of Broadview

such documents as may be necessary to make such acceptance effective, and it is further

Ordered, That the form of said ordinance be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the ordinance passed by the Village of Broadview, referred to in the foregoing report:

AN ORDINANCE

Concerning the Right of The Sanitary District of Chicago to Construct, Reconstruct, Maintain and Operate an Intercepting Sewer, Adjunct and Addition to Its Main Channel Within the Village of Broadview.

Be It Ordained by the President and the Board of Trustees of the Village of Broadview:

SECTION 1. That the right of The Sanitary District of Chicago to construct such intercepting sewers, adjuncts and additions to its main channel, and such pumping stations, sewage treatment plants and appurtenances connected therewith, as the Board of Trustees of The Sanitary District of Chicago shall deem necessary to dispose of and convey to its main channel the sewage of the Villages of Forest Park, River Forest and Maywood and other parts of the township of Proviso, County of Cook and State of Illinois, and construct and maintain such intercepting sewers, adjuncts and additions to said main channel and such pumping stations, sewage treatment plants and appurtenances connected therewith, within the corporate limits of the Village of Broadview, and for such purpose to enter upon, use and occupy the streets, alleys, public places or such portions thereof within or without the corporate limits of said Village as The Sanitary District of Chicago may deem necessary to construct and maintain, change, modify, extend, reconstruct, repair and operate said intercepting sewers, adjuncts and additions and such pumping stations, sewage treatment plants and appurtenances connected therewith, subject to the provisions and limitations of an Act entitled, "An Act to Create Sanitary Districts and to Remove Obstructions in the Desplaines and Illinois Rivers,' approved May 20, 1889 and in force July 1, 1889, and all amendments thereto, is hereby recognized by the Village of Broadview, and such right of The Sanitary District of Chicago is hereby confirmed.

SEC. 2. The Village of Broadview hereby gives and grants to The Sanitary District of Chicago the right, permission and authority to enter upon, use and occupy such streets, alleys and public places, within the corporate limits of the Village of Broadview, as The Sanitary District of Chicago may deem necessary in order to construct, maintain, change, extend, reconstruct, repair and modify such intercepting sewers, adjuncts and additions to its main channel and such pumping stations, sewage treatment plants and appurtenances connected therewith. The location, size and manner of construction of said intercepting sewers, adjuncts and additions, pumping stations, sewage treatment plants and appurtenances shall be in accordance with such plans and specifications as may be adopted by The Sanitary District of Chicago, and

The Village of Broadview further agrees that all materials, plant and equipment used in the construction of said intercepting sewers, adjuncts and additions to said Main Channel and said pumping stations, sewage treatment plants and appurtenances connected therewith, may be transported to the site of said work on and across the streets, alleys and public places of said Village of Broadview by the use of dinkey engines and cars running on temporary tracks laid on the surface of said streets, alleys and public places, or by the use of horses and vehicles or by other means of transportation, and that all surplus soil and debris excavated in the course of the construction of said intercepting sewer, adjuncts and additions and said pumping stations, sewage treatment plants and appurtenances connected therewith, may be disposed of by The Sanitary District of Chicago or its contractor in the same manner as hereinabove specified for the transportation of material and plant.

SEC. 3. The said intercepting sewers, adjuncts and additions to the main channel of The Sanitary District of Chicago and said pumping stations, sewage treatment plants and appurtenances connected therewith shall be constructed and maintained by said The Sanitary District of Chicago at its own cost and expense.

SEC. 4. The said Village of Broadview does hereby direct and shall by ordinance or resolution require all persons, partnerships or corporations, who shall at the time of the construction of said intercepting sewers, adjuncts and additions, pumping stations, sewage treatment plants and appurtenances connected therewith, own, operate or maintain any conduits, wires, poles, pipes, gas mains, manholes, cables, street railway tracks and equipment or other structures within that portion of the streets, alleys and public places to be used in the construction, repair, extension or modification of such intercepting sewers, adjuncts and additions, pumping stations, sewage treatment plants and appurtenances, at his, its or their own expense to make such changes in the location of such conduits, wires, poles, pipes, gas mains, manholes, cables, street railway tracks and equipment or other structures as may be rendered necessary by the construction of said intercepting sewers, adjuncts and additions to said main channel, and said pumping stations, sewage treatment plants and appurtenances connected therewith.

The Sanitary District of Chicago shall have the right and the right is hereby given and granted to it to take such steps in the name of the Village of Broadview or otherwise as it may deem necessary for the enforcement of any ordinance, order or resolution of the Village of Broadview necessary to be enforced to accomplish the purposes herein mentioned at the expense of The Sanitary District of Chicago; and the said The Sanitary District of Chicago shall indemnify and save harmless the said Village of Broadview from any and all damages or claims that are in the nature of a legal liability that may be sustained or made by reason of the passage or enforcing of such ordinance, order or resolution.

SEC. 5. That whenever or wherever The Sanitary District of Chicago shall in the construction of its said intercepting sewer, adjuncts and additions to its main channel, intersect or cut, or cause to be intersected or cut, any sewers, sewerage pipes, or other pipes or structures through which sewage or drainage may flow, The Sanitary District of Chicago shall restore said pipes, or structures to their former condition of usefulness, in a manner to be approved by the Chief Engineer of The Sanitary District of Chicago.

SEC. 6. The said intercepting sewer, adjuncts and additions to the said main

channel and said pumping stations, sewage treatment plants and appurtenances connected therewith to be constructed as provided in this ordinance, shall be constructed, maintained and operated solely by The Sanitary District of Chicago, and the said Village of Broadview shall not be held responsible in any manner for the location and manner of construction, maintenance or operation of the same; and The Sanitary District of Chicago shall indemnify and hold harmless the Village of Broadview from any and all claims for damages to real or personal property by reason of the construction or manner of construction of said intercepting sewer, adjuncts and additions, pumping stations, sewage treatment plants and appurtenances within the corporate limits of said Village of Broadview.

SEC. 7. That the Sanitary District of Chicago shall restore as soon as practicable to their former state of usefulness, all streets, alleys and public places and all pavements, walks, cross-walks, curbs and other public property upon, under and through which said intercepting sewer, adjuncts and appurtenances are constructed and which are damaged thereby within the corporate limits of said Village of Broadview, except that the Sanitary District of Chicago shall not be held liable for such ordinary wear and tear as may be sustained by hauling material, surplus excavation or equipment in motor trucks, horse drawn wagons or trucks, or other vehicles. All surplus excavation and other spoil shall be removed from the site of the work by The Sanitary District of Chicago as soon as practicable, said Village of Broadview hereby agreeing to permit said spoil or any portion thereof to be carried through the streets, alleys and other public places within said Village of Broadview, and to be deposited within the corporate limits of said Village. The public use of the public property within the said Village of Broadview above specified shall not be unnecessarily interrupted or interfered with.

Insofar as is practicable, The Sanitary District of Chicago shall construct and maintain for both street and foot traffic temporary bridges or temporary diversions until the pavement, walks and cross-walks removed or disturbed by reason of said work of excavation shall be restored to their former usefulness.

SEC. 8. In consideration of the passage of this ordinance and the benefit conferred thereby on the Village of Broadview, said Village of Broadview shall and does hereby give, grant and issue without fees or cost therefor to The Sanitary District of Chicago or to any contractor to whom the work or any part thereof specified in this ordinance shall be awarded, all permits or licenses required for doing said work, and shall furnish free of cost to The Sanitary District of Chicago, or to any contractor to whom the work or any part shall be awarded at any existing water connection or hydrant, all water needed by it or them in the performance of said work to the extent of the reasonable capacity of the Village's water plant to furnish the same in addition to the Village's own reasonable needs.

Further, said Village of Broadview agrees that it will employ and furnish at its own expense any and all engineers or inspectors required by the rules and ordinances of said Village or who may be employed by said Village for any purpose in connection with the construction, maintenance, repair or reconstruction of said intercepting sewer, adjuncts and appurtenances.

SEC. 9. This ordinance shall be in force and effect from and after its passage and approval and the acceptance of the same by The Sanitary District of Chicago within ninety (90) days from the date of the passage hereof, which acceptance shall be evidenced by a certified copy of the order, resolution or ordinance of the Board of Trustees of

The Sanitary District of Chicago accepting the same, filed with the Clerk of the Village of Broadview.

HERMAN C. BERNDT,
President of the Village of Broadview.
Attest:
JAMES GRANT, (Seal)
Village Clerk.
Approved as to form:
JAS. M. SLATTERY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.
Approved as to engineering:
RALPH H. BURKE,
Division Engineer.
G. M. WISNER,
Chief Engineer.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to report that the semi-annual interest on the thirteenth, fifteenth, twenty-second, twenty-third, twenty-fourth and twenty-ninth issue of bonds of The Sanitary District of Chicago, amounting to the sum of one hundred two thousand, five hundred twenty and no/100 ($102,520.00) dollars, falls due June 1, 1919, as follows:

Six months' interest on $300,000.00 of the thirteenth issue at 4 per cent per annum	$ 6,000.00
Six months' interest on $375,000.00 of the fifteenth issue, at 4 per cent per annum	7,500.00
Six months' interest on $880,000.00 of the twenty-second issue, at 4 per cent per annum	17,600.00
Six months' interest on $496,000.00 of the twenty-third issue, at 4 per cent per annum	9,920.00
Six months' interest on $1,375,000.00 of the twenty-fourth issue, at 4 per cent per annum	27,500.00
Six months' interest on $1,700,000.00 of the twenty-ninth issue, at 4 per cent per annum	34,000.00
Total interest on bonds	$102,520.00

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby instructed to draw a warrant, payable to the order of the Treasurer of The Sanitary District of Chicago, for the sum of one hundred two thousand, five hundred twenty and no/00 ($102,520.00) dollars, to pay the semi-annual interest due June 1, 1919, on the thirteenth, fifteenth, twenty-second, twenty-third, twenty-fourth and twenty-ninth issues of bonds of The Sanitary District of Chicago, said amount to be charged by the Clerk to the proper account.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Fi-

nance reports that the appropriation bill of the Sanitary District for the year 1919 (page 114 of the Proceedings) sets up in the Sanitary Division of the Engineering Department, four positions with salaries attached thereto, totalling the sum of $19,200.00 and under the Mechanical Division of said Engineering Department, two positions with the salaries attached thereto (page 115 of the Proceedings), totalling the sum of $4,200.00, which positions and salaries are set forth in the order hereto attached.

Your Committee further reports that the Committee on Employment has requested that the salaries attached to certain of said positions be adjusted and that other positions under said Division be created to meet the requirements of the Engineering Department, which can be done without increasing the respective sums of $19,200.00 and $4,200.00 heretofore appropriated.

Your Committee having considered said request, is of the opinion that same should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be and he is hereby authorized and directed to make adjustments of the positions and salaries set up under the Sanitary and Mechanical Divisions of the Engineering Department in the Appropriation Bill for the year 1919 in accordance with the requirements of the Committee on Employment as follows:

DEPARTMENT OF ENGINEERING—ACCOUNT NO. II.
SALARIES AND WAGES OF REGULAR EMPLOYES.
Sanitary Division.

Change from—	
Division Engineer, one at $4,500.00	$ 4,500.00
Assistant Engineers, three at $2,700.00	8,100.00
Chemist, one at $3,000.00	3,000.00
Principal Assistant Chemists, two at $1,800.00	3,600.00
	$ 19,200.00
to—	
Division Engineer, eight months, one at $4,500.00	3,000.00
Assistant Engineers, two at $2,700.00	5,400.00
Assistant Engineer, eight months, one at $3,000.00	2,000.00
Chemist, nine months, one at $3,000.00	2,250.00
Principal Assistant Chemists, two at $1,800.00	3,600.00
Principal Assistant Chemists, ten months, one at $1,800.00	1,500.00
Tracer, eleven months, one at $1,560.00	1,450.00
	$ 19,200.00

Mechanical Division.

Change from—	
Assistant Mechanical Designing Engineer, one at $2,400.00	$ 2,400.00
Mechanical Draftsman, one at $1,800.00	1,800.00
	$ 4,200.00
to—	
Assistant Mechanical Engineers, two at $2,100.00	$ 4,200.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of May payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 71.87	
John McGillen, Clerk (recording document)	30.05	
John McGillen, Clerk (recording document)	5.25	
John McGillen, Clerk (recording document)	4.00	
John McGillen, Clerk (recording document)	1.85	
Strobel Steel Construction Company (erection of metal work)	3,915.00	
Chicago & Western Indiana R. R. Company (material and freight charges, B. & O. temporary bridge)	1,340.42	
Nash-Dowdle Company (labor operating pumping plant)	775.00	
E. A. Hanrahan (connecting drainage ditches, Calumet-Sag)	490.00	
L. D. Leach & Co. (piling for temporary bridge)	421.00	
T. J. Forschner Contracting Company (furnishing and placing drain pipes)	302.00	
Peter Post (repairing tile sewer)	190.00	
Peth & Goeler (repairing level, etc.)	26.35	
J. J. McGraw (coal)	27.00	
The Bristol Company (two gauges)	20.32	
The Chicago Evening Post Company (advertising)	20.10	
The Chicago Evening Post Company (advertising)	17.40	
United States Rubber Company (men's mackinaw waders)	16.50	
Augusta Rau Schwarz (rent)	12.00	
Burr-Vack Company (office equipment)	8.40	
Josephine Eck (rent)	8.00	
Chas. E. Arnold Company (batteries and key)	1.40	
Commonwealth Edison Company (electrical energy)	.50	
		$ 7,703.41

Maintenance and Operation Account.

The Wm. H. Reid Company (oil, 39th St. Pumping Station)	$ 200.73	
Kenwood Trucking & Teaming Company (teaming, 39th St. Pumping Station)	136.00	
Buissono Bros. Mfg. Company (labor and material, 39th St. Pumping Station)	97.02	
Henry M. Joda (material and labor, 39th St. Pumping Station)	71.00	
American Supply Company (sanitary wipers, 39th St. Pumping Station)	65.09	
Parker's Towel Supply Company (towel service, 39th St. Pumping Station)	11.20	
Amounts carried forward	$ 581.04	$ 7,703.41

Amounts brought forward	$ 581.04	$ 7,703.41
Henion & Hubbell (Smooth-On, 39th St. Pumping Station)	9.95	
The Kellogg-Mackay Company (tees, 39th St. Pumping Station)	6.24	
Worthington Pump & Machinery Corporation (valves, etc., 39th St Pumping Station)	4.94	
City Sealer, City of Chicago (testing scale, 39th St. Pumping Station)	3.50	
Bissell Laundry Company (towel service, 39th St. Pumping Station)	1.45	
North Shoe Ash Company (removing cinders, Lawrence Ave. Pumping Station)	148.80	
The Chicago Evening Post Company (advertising, Lawrence Ave. Pumping Station)	41.40	
Kirby Motor Trucking Company (cartage, Lawrence Ave. Pumping Station)	10.11	
H. W. Johns-Manville Company (sheets of packing, Lawrence Ave. Pumping Station)	8.66	
United Asbestos & Packing Company (gauge glasses, etc., Lawrence Ave. Pumping Station)	2.75	
Hills-McCanna Company (fusible plugs, Lawrence Ave. Pumping Station)	2.00	
The Hoppes Mfg. Company (castings for purifier, Lawrence Ave. Pumping Station)	1.31	
National Brick Company (hauling bridge material)	81.75	
F. P. Smith Wire & Iron Works (arrow vanes)	27.60	
G. Johnson (teaming)	27.00	
Frederick C. Hanmore, M. D. (professional services)	20.00	
Devoe & Raynolds Company, Inc. (paints, varnish and dryer)	19.28	
Amberg File & Index Company (transfer drawers, etc.)	14.64	
Sweet, Wallach & Co. (photographic supplies)	12.67	
The Lord & Bushnell Company (lumber)	7.36	
The Fair (cocoa mat)	3.50	
Harry Brown (cement sacks)	3.40	
Vaughan's Seed Store (lawn seed)	2.30	
Parker's Towel Supply Company (towel service)	1.60	
John McGillen, Clerk (special roll, Lawrence Ave. Pumping Station)	153.40	
John McGillen, Clerk (special roll, repairs to levee at Summit)	176.00	
		1,372.65
Illinois & Michigan Canal and Illinois River Conditions Department.		
E. H. Heilbron (expenses of employes)	$ 88.26	
Haynes Motor Car Company (four hood hooks)	1.80	
		90.06
Law Department.		
John McGillen, Clerk (fees for copy of opinion)	$ 5.00	
John McGillen, Clerk (fees paid Secretary of State for copy of annual report, re reinstatement of Byrne Bros. Dredging & Engineering Company)	1.50	
F. Sippel Garage Company (storage and repairs)	39.42	
Wm. W. Smith (recording release)	1.25	
		47.17
Clerical Department.		
Bentley, Murray & Co. (loose vc. records)	$ 73.00	
Columbia Ribbon & Carbon Mfg. Company (ribbons and carbon)	23.00	
Amounts carried forward	$ 96.00	$ 9,213.29

Amounts brought forward	$ 96.00	$ 9,213.29
A. B. Dick Company (stencil paper)	20.00	
The Fred J. Ringley Company (checks and stubs)	20.00	
Burr-Vack Company (supplies)	6.14	
		142.14
Real Estate Department.		
Coll McNaughton (amount paid to Coll McNaughton to cover difference erroneously omitted)		14.51
Police Department.		
James D. Ahern Company (lettering window)		2.50
General Account.		
John McGillen, Clerk (amount paid for railroad tickets and accommodations to New Orleans, La., for Trustee Healy)	$ 46.30	
John McGillen, Clerk (tickets to Springfield for First Asst. Attorney Ross C. Hall, Illinois Valley Attorney Walter E. Beebe, Chief Engineer George M. Wisner and Engineer Horace P. Ramey in re legislative matters)	27.32	
John McGillen, Clerk (expenses of First Asst. Attorney Ross C. Hall to Springfield in re legislative matters)	19.97	
John McGillen, Clerk (expenses of Trustee Wallace G. Clark and First Asst. Attorney Ross C. Hall to Springfield)	16.32	
Standard Oil Company (rental of main office, etc.)	2,649.54	
Fred Klein Company (printing Proceedings)	340.75	
Fred Klein Company (printing Proceedings)	244.50	
The Chicago Evening Post Company (advertising)	49.20	
The Chicago Tribune (advertising)	43.00	
The Chicago Daily News Company (advertising)	30.60	
Parker's Towel Supply Company (towel service)	26.00	
Walden W. Shaw Livery Company (automobile service for President Sergel and Mr. Foley, Secretary, inspection of Calumet Pumping Station, etc.)	21.30	
The Fred J. Ringley Company (envelopes)	17.50	
Chicago Telephone Company (telephone service)	15.52	
The Fair (frame)	12.55	
20th Century Press Clipping Bureau (clippings)	8.00	
L. Gould & Co. (drinking cups)	3.75	
Standard Oil Company (connecting desk lamps)	2.65	
		3,577.77
Electrical Department.		
John McGillen, Clerk (freight charges)	$ 19.49	
John McGillen, Clerk (Faultless anchors)	4.23	
Commonwealth Edison Company (installing one oil switch, etc.)	3,320.92	
The Kellogg-Mackay Company (black pipe)	446.32	
Wilmington Fibre Specialty Company (fibre bushings, etc.)	415.00	
H. F. Reger & Co. (installing new boiler sections, etc.)	308.00	
Westinghouse Electric & Mfg. Company (relays)	302.40	
Westinghouse Electric & Mfg. Company (relays)	298.20	
John Naghten & Co. (insurance)	207.82	
The Ohio Brass Company (porcelain insulators)	202.56	
Humphrey & Sons Company (rabbitt and bore 2 sheels)	130.00	
Wilbur J. Connell (glass, etc.)	115.78	
Stebbins Hardware Company (brass wire cloth, etc.)	96.75	
Union Petroleum Company (gasoline)	94.30	
Bentley, Murray & Co. (printing)	79.50	
Amounts carried forward	$ 6,041.27	$ 12,950.21

Amounts brought forward	$ 6,041.27	$ 12,950.21
American Supply Company (sanitary wipers)	76.06	
Chicago Aluminum Casting Company (aluminum dead end grips)	68.90	
Wm. Sorgenfrei (rental)	60.00	
Commonwealth Edison Company (Mazda lamps)	54.55	
Devoe & Raynolds Company, Inc. (white lead, etc.)	47.87	
United States Fidelity & Guaranty Company (insurance)	45.50	
The Lombard Governor Company (pump cylinders)	41.50	
Western Electric Company (lag screw pins)	37.80	
Burr-Vack Company (pencils, etc.)	36.41	
The Fred J. Ringley Company (envelopes)	35.12	
L. L. Fleig & Co., Inc. (linen armature twine)	34.30	
Esterline Company (record charts, etc.)	33.48	
The Kellogg-Mackay Company (conduit lock nuts)	30.64	
International Harvester Company (gaskets, etc.)	29.58	
Commonwealth Edison Company (porcelain tubes)	29.40	
Geo. B. Carpenter & Co. (manila rope, etc.)	29.03	
General Electric Company (armature, etc.)	26.90	
Wm. Heggie (boring and keyseating 2 gears, etc.)	26.60	
Burr-Vack Company (Sanford fluid, etc.)	26.14	
The Lord & Bushnell Company (lumber)	25.81	
A. C. Miller (gasoline)	25.30	
Westinghouse Electric & Mfg. Company (single phase registers)	24.84	
Hydrox Company (drinking water)	24.00	
General Electric Company (typewriter ribbons, etc.)	23.12	
The Electric Auto Lite Service Station (generator)	22.05	
Mead & Wheeler Company (mahogany chair)	20.50	
American Sand & Gravel Company (torpedo sand)	20.50	
Burr-Vack Company (scratch pads)	20.00	
J. W. Landis Mill Company (maple sticks, etc.)	20.00	
Conroy Boiler & Tank Works (bolts)	19.90	
The Chicago Evening Post Company (advertising)	19.80	
Wadsworth-Howland Company (Regal enamel)	19.57	
Weil Bros. (steel pipe)	18.40	
Auto Cape Top Company (two curtains)	17.85	
Nelson & Le Moon (springs, etc.)	14.65	
Windle Garage (garage rental)	12.00	
H. M. Hooker Glass & Paint Company (galvanized asphaltum)	12.00	
Kirby Motor Trucking Company (cartage)	9.92	
Jas. H. Kirk Company, Inc. (slack barrels)	9.00	
Stebbins Hardware Company (spring valve oiler, etc.)	7.68	
H. Channon Company (safety spectacles)	7.59	
Vesta Accumulator Company (battery, etc.)	7.37	
City Collector, City of Chicago (guy stub anchor, etc.)	6.50	
American Blue Print Paper Company (tracing paper)	6.40	
H. M. Hooker Glass & Paint Company (shellac)	5.22	
International Harvester Company (front spring, etc.)	5.02	
L. L. Fleig & Co., Inc. (fuses)	4.63	
Auto Radiator Mfg. Company (radiator repaired)	4.00	
Monarch Electric & Wire Company (Ruby lamp covering)	3.53	
General Electric Company (bushings, etc.)	3.33	
Wilbur J. Connell (glass)	3.00	
S. & L. Motor Company (auxiliary radius rod, etc.)	2.93	
R. Hanisch Sons Company (Mazda min. lamps)	2.88	
General Electric Company (switch arm handle)	2.34	
Vaughan's Seed Store (lawn seed)	2.30	
Tungsten Mfg. Company (files)	1.80	
Amounts carried forward	$ 7,266.78	$ 12,950.21

Amounts brought forward		$ 7,266.78	$ 12,950.21
The Beckley-Ralston Company (switch dimming)		.90	
The C. H. Hanson Company (rubber stamp)		.75	
Interstate Brass Company (strap brass)		.40	
			7,268.83

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 59.98		
Real Estate Department	5.62		
		$ 65.60	
John McGillen, Clerk (expenses of employe)—			
Law Department	$ 6.35		
General Account	9.51		
		15.86	
John McGillen, Clerk (expenses of employe)—			
Maintenance and Operation Account	$ 2.55		
Clerical Department	9.30		
Electrical Department	2.75		
		14.60	
Edmund D. Adcock (professional services rendered re Lake Level Controversy)—			
Law Department	$ 50.00		
General Account	950.00		
		1,000.00	
Mosior Garage (auto services)—			
Maintenance and Operation Account	$ 54.00		
General Account	12.00		
Electrical Department	128.00		
		194.00	
Burr Vack Company (Higgins ink, etc.)—			
Clerical Department	$ 1.00		
General Account	.15		
		1.15	
John McGillen, Clerk (repairs to North Shore Channel bridges, etc.)—			
Construction Account	$ 217.20		
Maintenance and Operation Account	1,416.25		
		1,633.45	
John McGillen, Clerk (repairs to Main Channel bridges and Desplaines river bridges, building scow for Electrical Department)—			
Maintenance and Operation Account	$ 241.00		
Electrical Department	111.80		
		352.80	
John McGillen, Clerk (special roll, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 186.12		
Electrical Department	96.00		
		282.12	
			3,559.58
Grand Total			$ 23,778.62

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance *(except as to voucher to Edmund D. Adcock, for professional services rendered in re Lake Level Controversy, $1,000.00, on which Mr. Nance voted "nay")* and Paullin—Eight on all vouchers, and nine on all vouchers with the exception above noted.

Nays—None (with the exception of one voucher above noted).

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on March 20, 1919 (page 276 of the Proceedings) the Board authorized the Chief Engineer to direct Nash Bros. to remove and rebuild approximately 272 feet of the invert of the Desplaines river intercepting sewer, Contract No. 1, under the extra work clause of its contract for constructing said sewer at a cost of not to exceed $4,000.00.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the total cost of the said work computed as specified under said extra work clause is $4,386.05, which is $386.05 in excess of the amount authorized; that the cost of the entire work has been checked and found to be correct and he recommends that the same be paid said contractors.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $4,386.05, payable to Nash Bros. and deliver the same to them in full payment of their bill for said work.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting held May 1, 1919 (page 366C of the Proceedings), bids for underground conduit construction, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the F. E. Newbery Electric Company.

Your Committee further reports that it is of the opinion that said company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for work

of underground conduit construction be and the same is hereby awarded to the F. E. Newbery Electric Company for the unit prices named in its bid aggregating the sum of $45,701.65, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said F. E. Newbery Electric Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer with which he transmits a communication from Colonel W. V. Judson, Corps of Engineers, U. S. A., enclosing a plan presented by the City of Chicago for the construction of a bascule bridge at West Madison street over the south branch of the Chicago River to replace an existing central pier bridge at said site and requesting to be informed whether the plan submitted meets the approval of the Sanitary District.

The Chief Engineer states that the conditions of the south branch of the Chicago River at Madison street are similar to those existing at Monroe, Adams and Jackson streets in that the west abutments of said bridges can encroach only to a limited extent on the property of the Chicago Union Station Company and the west line of the abutment of the Madison street bridge is fixed by the Chicago Union Station ordinance at 239.1 feet east of the east line of Canal street at the south line of Madison street and that the east face of the west abutment of said new bridge will thereafter project about twenty feet into the river.

A layout for a bridge at this point providing 180 foot clear channel was submitted to the District in 1913 and by direction of the Committee on Engineering was approved by the Chief Engineer, the 180-foot channel being the maximum that could be obtained between the west abutment and the east dock of the river.

The Chief Engineer further states that the city has now devised a plan to keep the existing swing bridge in commission while the new bascule bridge is being built by lengthening the clear span of the bascule bridge to 188 feet between the abutments so that the swing bridge can operate between the two leaves of the new bridge, as they are erected in a standing position, and that the clear channel through said new bridge will remain at 180 feet.

He further states that the cross-section of the river obtained for flow with 180-foot opening is about 4,500 square

feet when dredged to the standard depth of 26 feet, which will give a velocity of 1.2 miles per hour for a flow of 6,000 cubic feet per second in the river, and he recommends that the plan submitted be approved by the Sanitary District.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer is hereby authorized to approve the plan submitted by Colonel W. V. Judson, Corps of Engineers, U. S. A., for the construction of the bascule bridge above described across the south branch of the Chicago river at Madison street.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering herewith transmits a form of agreement to be entered into between the Sanitary District and The Western Union Telegraph Company granting permission and authority to install and maintain a submarine armored cable across the bottom of the Main Channel of the Sanitary District on the west or down stream side of what is known as the eight-track bridge.

Your Committee reports that it has examined said agreement, which has been approved by the Chief Engineer and the Attorney and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said form of agreement hereto attached, the same having been executed by the officials of said company.

Respectfully submitted
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the form of agreement between The Sanitary District of Chicago and the Western Union Telegraph Company:

THIS AGREEMENT, Made and entered into this first day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation, organized and existing under and by virtue of the laws of the State of Illinois, hereinafter designated as the "District," and the Western Union Telegraph Company, a corporation organized and existing under and by virtue of the laws of the State of Illinois, hereinafter designated as the "Company," WITNESSETH:

WHEREAS, The said Company is desirous of excavating, building and maintaining a submarine armored cable across the bottom of the Main Channel of the District on the west or down stream side of what is known as the eight-track bridge near Marshall boulevard, in the City of Chicago, County of

Cook and State of Illinois, and has applied to said District for permission so to do, which the District is willing to grant,

Now, Therefore, In consideration of the premises and the mutual covenants and agreements hereinafter set forth, it is agreed by and between the parties hereto as follows:

1. The said District hereby gives and grants to the said Company, insofar as it can legally do so, permission and authority to lay and maintain a submarine armored cable across the bottom of the Main Channel on the west or down stream side of what is known as the eight-track bridge near Marshall boulevard, in the City of Chicago, County of Cook and State of Illinois, in the location and at the points designated in red on the plat hereto attached and made a part hereof as Exhibit "A."

2. Said cable shall be installed and maintained by said Company at its sole cost and expense and in a manner satisfactory to the Chief Engineer of said District, and said work shall conform in all respects to the requirements of all ordinances of the City of Chicago.

3. If, at any time, the District elects to deepen, widen or dock said Main Channel,or to do other work of any kind, nature or description in or about the same, or shall permit any person, firm or corporation to do any such work or any work upon the substructure or superstructure of the said eight-track bridge, or on its right-of-way contiguous and adjacent to said bridge, necessitating the temporary removal of said armored cable, the said Company shall, on demand, raise, lower or otherwise alter or change the location of said armored cable when requested so to do by the Chief Engineer of the District within such time and in such manner as said Chief Engineer shall direct at its own cost and expense, and, upon the failure of said Company to so remove said armored cable when requested so to do as above set forth, the said District shall have the right to immediately remove said armored cable at the expense of said Company, free of any and all claims for damages which might result from such removal.

4. It is further understood and agreed that the District shall not be liable for any damages caused to said armored cable or to any property of said Company, by reason of any act of said District, or of its contractors in widening, deepening or docking the said Main Channel, or caused by boats navigating the waters of said Main Channel, or caused by electric currents escaping from the poles, towers and wires of said District, it hereby being the intention of the said Company to absolve the said District from any and all damages of every kind, nature and description, growing out of the installation, use, operation or removal of the said armored cable and the use and operation of the poles, towers and wires of said District, and from damages caused by electric currents escaping from the same, and said Company agrees to keep and save harmless said District against any and all liabilities, judgments, costs, damages and expenses which may in any wise, directly or indirectly, come against or result from the installation, operation, maintenance or removal of said armored cable.

5. The said District may terminate this agreement at any time hereafter by giving to the said Company sixty (60) days' notice, in writing, of its intention so to do, at the expiration of which time all rights and privileges of the Company hereunder shall at once cease and determine and said Company will, at its sole cost and expense, remove its said armored cable without causing damage of any kind to the property of said District, and in event of its failure so to remove its armored cable within the time specified the District shall have the right to remove the said armored cable at the expense of said Company, and the said Company agrees to pay said District the cost of the same upon demand.

In Witness Whereof, The parties hereto have caused these presents to be signed, in duplicate, by their duly authorized officers, to be duly attested and their corporate seals to be hereto affixed, the day and year first above written.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman, Committee on Finance.

Attest:
John McGillen, (Seal)
Clerk.

The Western Union Telegraph Company.
By G. W. V. Atkins,
First Vice-President.

Attest:
O. W. E. Lennon, (Seal)
Asst. Secretary.

Approved as to Terms and Conditions:
G. M. YORKE,
Vice-President in Charge of Plant and Engineering.

Approved as to Form:
RUSH TAGGART,
General Counsel.

Approved as to Form:
CHAS. E. ANTHONY,
Asst, Attorney.

C. ARCH WILLIAMS,
Attorney.

Approved as to Engineering:
G. M. WISNER,
Chief Engineer.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting held May 15, 1919 (page 534 of the Proceedings), bids for furnishing, delivering and installing plumbing, service piping, gas fitting and conductor pipe work for the Evanston Sewage Pumping Station, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Murphy Plumbing Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work, and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for work of furnishing, delivering and installing plumbing, service piping, gas fitting and conductor pipe work for the Evanston Sewage Pumping Station be, and the same is hereby awarded to the Murphy Plumbing Company for the lump sum price named in its bid of $1,806.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Murphy Plumbing Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering to which were referred at the meeting of May 15, 1919 (page 534 of the Proceedings), bids for furnishing, delivering and installing plumbing, service piping, gas fitting and conductor pipe work for the Calumet Sewage Pumping Station for the Sanitary Dis-

trict, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Carl John Stein Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing, delivering and installing plumbing, service piping, gas fitting and conductor pipe work for the Calumet Sewage Pumping Station be, and the same is hereby awarded to the Carl John Stein Company for the lump sum price named in its bid of $8,442.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Carl John Stein Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that the City of Chicago on April 2, 1919, passed an ordinance granting to the Sanitary District permission and authority to maintain and operate as heretofore constructed, under an ordinance passed by the City Council January 25, 1902, as amended by an ordinance passed by said City Council March 29, 1904, a masonry duct or water tunnel five (5) feet in diameter and a return pipe or conduit three (3) feet in diameter in East Thirty-ninth street between South State street and the first north-and-south public alley east of South State street connecting the power house and station of the South Side Elevated Railroad Company on the south side of said street at that point with the Thirty-ninth street conduit. Said conduit and duct is to be used solely for cooling or condensing purposes by said Railroad Company in its said power house and station. Said grant is for a period of fifteen years from and after January 25, 1919, but may be revoked at any time prior thereto by the Mayor in his discretion without the consent of the Sanitary District and is also subject to amendment, modification or repeal by the City Council of said City at any time without the consent of the Sanitary District, and in case of such repeal all the privileges granted therein shall cease and determine and the City may retain all money received under the provisions of said ordinance.

The Sanitary District agrees to pay the City of Chicago as compensation for said duct and conduit the sum of $50 per annum, payable annually in advance, first payment to be made as of the date of January 25, 1919, and if default is made in the payment of any of the installments of said compensation, the privileges granted in said ordinance may be terminated under any one of the powers reserved to the Mayor or City Council by Section 2 of said ordinance and thereupon said ordinance shall become null and void.

Said ordinance also contains provisions relative to the removal of said duct and conduit, the use and restoration of said street, the necessity of obtaining a permit for work to be done on said duct and conduit and other provisions.

Your Committee further reports that Section seven (7) of said ordinance provides that said ordinance shall take effect and be in force from and after its passage, provided the said Sanitary District shall file its written acceptance of the same and together with the bond prescribed in Section six (6) of said ordinance with the City Clerk within sixty days after the passage thereof.

Your Committee having carefully considered said ordinance, recommends the passage of the following order:

Ordered, That the Sanitary District does hereby accept the terms and conditions of said ordinance of the City of Chicago above referred to and agrees to carry out all the terms and conditions therein specified to be kept and performed by said Sanitary District, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute for and on behalf of the Sanitary District a good and sufficient bond in the penal sum of $10,000.00, with a surety thereon to be approved by the Mayor conditioned as set forth in Section six (6) of said ordinance, and to incur all necessary expenses relative to procuring such bond, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be and they are hereby authorized and directed to file with the City Clerk of Chicago a written acceptance of said ordinance and the bond above specified and such other documents as may be necessary to make such acceptance effectual.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the ordinance passed by the City Council of the City of Chicago, referred to in the foregoing report:

WHEREAS, By an ordinance passed January 25, 1904, and amended as to Section 2 of said ordinance by an amendatory ordinance passed March 29, 1904, the City of Chicago granted The Sanitary District of Chicago permission and authority for a period of fifteen years from the passage of said ordinance of January 25, 1904, to construct, lay down, maintain and operate a masonry duct or water tunnel five (5) feet in diameter in 39th street between Wabash avenue and State street connecting the power house and station of the South Side Elevated Railroad Company, located at State street between 39th and 40th streets in the City of Chicago with the 39th street conduit; and also to construct, lay down,

maintain and operate in said 39th street, between Wabash avenue and State street and connecting said power house and station with said 39th street conduit, a return pipe or conduit three (3) feet in diameter for the purpose of conveying from and returning to said 39th street conduit water to be used exclusively for cooling or condensing purposes by said South Side Elevated Railroad Company; and

WHEREAS, The Sanitary District of Chicago accepted said ordinance as amended, and filed its bond with said city as required by said ordinance of January 25, 1904, and caused said masonry duct or water tunnel and said return pipe or conduit to be constructed in all respects as specified in said ordinance as amended, and is now maintaining and using the same; and

WHEREAS, The Sanitary District of Chicago has requested that the period during which it might maintain and use said masonry duct or water tunnel and said return pipe or conduit be extended for a period of fifteen years from January 25, 1919; now, therefore,

Be It Ordained by the City Council of the City of Chicago:

SECTION 1. That permission and authority be and the same are hereby given and granted to The Sanitary District of Chicago, a municipal corporation, to maintain and operate as heretofore constructed under an ordinance passed by the City Council January 25, 1904, page 2118 of the Journal of the Proceedings of said date, as amended March 29, 1904, page 2864 of the Journal of the Council Proceedings of said last-mentioned date, a masonry duct or water tunnel five (5) feet in diameter and a return pipe or conduit three (3) feet in diameter in East 39th street between South State street and the first north-and-south public alley east of South State street connecting the power house and station of the South Side Elevated Railroad Company on the south side of said street at that point with the 39th street conduit; the location of said duct and conduit being substantially as shown in red upon blue print hereto attached, which for greater certainty is hereby made a part of this ordinance.

Said duct and conduit shall be used for the sole purpose of supplying said power house and station with water from said 39th street conduit and returning said water to said conduit to be used exclusively for cooling or condensing purposes by said Railroad Company in its said power house and station and shall not be used for any other purpose whatsoever.

SEC. 2. The permission and authority herein authorized shall cease and determine fifteen (15) years from and after January 25, 1919, or may be revoked at any time prior thereto by the Mayor in his discretion without the consent of the grantee herein named. This ordinance shall also be subject to amendment, modification or repeal at any time without the consent of the grantee, and in case of such repeal all the privileges herein granted shall thereupon cease and determine. In the event of the termination, revocation, amendment or modification of the authority or privileges herein granted by lapse of time, the exercise of the Mayor's discretion, or the exercise by the City Council of the powers above reserved, the said grantee, by the filing of the written acceptance hereinafter provided for, shall be understood as consenting that the city shall retain all money it shall have previously received under the provisions of this ordinance from said grantee, said money to be considered and treated as compensation for the authority, permission and privileges enjoyed from the date of the passage of this ordinance until such action by the Mayor or City Council as the case may be.

SEC. 3. At the expiration of the privileges herein granted, the duct and conduit herein authorized shall be removed, unless the privileges herein granted shall

be renewed. If said duct and conduit shall be removed the space where the same shall have been located shall be filled up and the pavement over the same restored to a condition similar to the balance of the street in the same block, to the satisfaction of the Commissioner of Public Works, at the sole expense of the grantee herein, without cost or expense of any kind whatsoever to the City of Chicago; provided, that in the event said grantee shall refuse or neglect to remove said duct and conduit when so ordered to do, and to restore the pavement over said space, said work shall be done by the City of Chicago, and the cost thereof charged to the grantee herein. Said grantee shall do no permanent injury to said street, or in any way interfere with any public cable, wire, pipe or conduit therein, and shall not open or incumber more of said street than shall be necessary to enable it to proceed with advantage in installing said duct and conduit. No permit shall be issued allowing any work to be done in and about the installation of said duct and conduit until plans and specifications of the completed structure shall first have been submitted to and approved by the Commissioner of Public Works. A copy of said plans shall at all times remain on file in the office of the said Commisioner of Public Works.

SEC. 4. The grantee herein agrees to pay to the City of Chicago as compensation for said duct and conduit the sum of fifty dollars ($50.00) per annum, payable annually in advance, the first payment to be made as of the date of January 25, 1919, and each succeeding payment annually thereafter; provided, that if default is made in the payment of any of the installments of compensation herein provided for, the privileges herein granted may be immediately terminated under any one of the powers reserved to the Mayor or City Council by Section two (2) hereof and thereupon this ordinance shall become null and void.

SEC. 5. During the life of this ordinance the grantee herein shall at all times keep the surface of the street over the said duct and conduit in a condition satisfactory to the Commissioner of Public Works and safe for public travel.

SEC. 6. No work shall be done under the authority of this ordinance until a permit authorizing same shall have been issued by the Commissioner of Public Works, and no permit shall issue until the grantee herein shall execute to the City of Chicago a good and sufficient bond in the penal sum of ten thousand dollars ($10,000.00) with sureties to be approved by the Mayor, conditioned upon the faithful observance and performance of all and singular the conditions and provisions of this ordinance, and conditioned further to indemnify, keep and save harmless the City of Chicago against all liabilities, judgments, costs, damages and expenses which may in any wise come against said city in consequence of the granting of this ordinance, or which may accrue against, be charged to or recovered from said city from or by reason or on account of any act or thing done by the grantee herein by virtue of the authority herein granted.

SEC. 7. This ordinance shall take effect and be in force from and after its passage; provided the said grantee shall file its written acceptance of this ordinance and the bond hereinabove provided for with the City Clerk within sixty (60) days after the passage hereof.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in the original design of the Evanston Sewage Pump-

ing Station it was proposed to use a water ejector to empty the drainage from the basement of said station, but it has recently been found that it is not practicable to use much apparatus under the conditions which exist at said station and that his department has designed an electrically driven sump pump for said purpose.

He further states that no device for emptying the drainage from the basement of said station was included under the terms of the contract between the Sanitary District and Nash-Dowdle Co. for the construction of said station nor was it included in the contract to be let for the installation of the plumbing in said station. He further states that Nash-Dowdle Company have agreed to install said pumps under the extra work clause of its contract with the Sanitary District dated October 10, 1918 (page 1240 of the Proceedings) for the construction of said station for the agreed price of $1,550.00; that he has checked said price and considers the same reasonable and requests that he may order said work done.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to order Nash-Dowdle Company to furnish and install the electrically driven sump pump above specified for the agreed price of $1,550.00 under the extra work clause of its contract with the Sanitary District for the construction of the said Evanston Sewage Pumping Station.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents renewal contracts with Patrick Joseph King, 1740 North Crawford avenue and the North Side Sash & Door Co., 2448 West 22d street, wherein the Sanitary District agrees to furnish and said parties agre to take fifty and eight kilowatts of electrical energy respectively for the time and upon the terms and conditions therein set forth, which contracts have been aproved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate the attached contracts which have heretofore been executed by said Patrick Joseph King and the North Side Sash & Door Co.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith transmits to the Board, form of agreement to be entered into between the Sanitary District and the City of Chicago, with reference to the completion of all work performed by the Sanitary District for said city under the terms and conditions of an agreement dated October 27, 1910 (pages 668-1011-1115-1170 of the Proceedings) and four supplementary and amendatory agreements thereto relating to the rehabilitation and operation of the electric street lighting system of said city, and the furnishing of electrical energy by said District for a period of five years from January 1, 1918.

In general, the agreement is a final settlement of the agreements referred to above and set up in considerable detail new covenants relating to the use of substations, transmission lines and electrical equipment and the operation and repair of the same by the respective parties.

The city agrees to pay said District for electrical energy furnished between December 8, 1917, to December 31, 1917, at the rates specified in said original agreement and to pay the District for the maintenance and operation of the substations of said city during the said period the actual cost of all labor and material, plus 15 per cent, and to maintain and operate all city substations after January 1, 1918, at its sole cost and expense.

The District agrees to furnish said city during the period mentioned, electrical energy for street lighting purposes to the amount of 10,000 kilowatts, designated as the "firm power," and if said city requires a greater amount of electrical energy for its street lighting purposes more than 10,000 kilowatts, then said firm power shall be increased 2,000 kilowatts, but in case the District is released from furnishing electrical energy to supply the 22nd street pumping station, then said firm power shall be increased to 11,000 kilowatts and the greater amount of electrical energy to be furnished shall be increased to 2,600 kilowatts.

Said City agrees to pay said District for all electrical energy furnished at the rate of $1.25 per kilowatt per month on the number of kilowatts constituting the maximum demand for the month, which maximum demand shall be determined by maximum demand curve-drawing or other instruments or meters installed by said District in the substations of said city, and shall be the highest average kilowatts demand indicated or recorded by said instruments or meters in any thirty minute interval during each month.

The District further agrees to rearrange or rebuild exposed or unprotected transmission lines or electrical equipment, in or on viaducts, subways, streets, alleys or public places so as to safeguard the public and minimize the liability of personal injuries resulting from electrical energy passing through the same at a cost of not to exceed $80,000.00, and to paint the electric light poles and equipment along the streets of said city at a cost of not to exceed $60,000.00, which sums are to be repaid to said District with 5 per cent interest thereon.

The District also agrees to advance to the city the sum of $1,180, to be used by said city in the payment of a bill of the Chicago Union Station Company for the installation of two additional ducts for said city on Harrison street which is to be repaid to said District on April 1,

1920, with interest thereon at 5 per cent per annum.

The agreement also contains provisions that said city will indemnify and save the District harmless from all judgments, damages, costs or expenses that may be sustained by said District by reason of certain suits for damages now pending in the courts of Cook County and others which may be brought against said District to recover damages occasioned directly or indirectly by electrical energy generated by said District and transmitted over or through or escaping from the street lighting system of said city.

The said agreement also contains other usual and general clauses of an engineering and legal nature and has been approved by the Electrical Engineer of the Sanitary District, the Commissioner of Gas and Electricity of the City of Chicago and also by the Attorney of said District and the Corporation Counsel.

Your Committee having carefully examined said agreement, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in quadruplicate the attached agreement, the same having been properly executed by the officials of the City of Chicago.

Respectfully submitted,
H. E. Littler,
Chairman.
Matt A. Mueller,
Wallace G. Clark,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the form of agreement between the City of Chicago and The Sanitary District of Chicago:

This Agreement, Made and entered into this first day of January, A. D., 1918, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, hereinafter designated as the "District", party of the first part, and the City of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, hereinafter designated as the "City," party of the second part,

Witnesseth, That

Whereas, the parties hereto entered into an agreement dated October 27, 1910 and thereafter at different times four supplementary and amendatory agreements thereto, relating to the rehabilitation, extension and operation of the electric street lighting system of said City and the furnishing of electrical energy therefor, and

Whereas, said District has duly completed the work to be performed by it under the terms of all of said agreements and has furnished the electrical energy for said electric street lighting system of said City for a period of seven years from the date said service was first begun, which period expired on December 8, 1917 and

Whereas, the parties hereto desire to enter into a new agreement relating, among other things to the operation and maintenance of certain substations of said City, and use of electrical equipment therein contained and the furnishing of electrical energy for the electric street lighting system of said City.

Now, Therefore, in consideration of the mutual covenants and agreements hereinafter set forth to be by the respective parties hereto kept and performed, said parties do hereby covenant and agree each with the other as follows:

1. That said District has fully completed in a satisfactory manner all work to be performed by it under the terms and conditions of an agreement dated October 27, 1910, and the four supplementary and amendatory agreements thereto by and between the parties hereto, relating to the rehabilitation, extension and operation of the

electric street lighting system of said City and that said District has in all other respects fully complied in a satisfactory manner with the terms and conditions of said agreements. Said City hereby receives, takes over and accepts all of the work performed by said District under said agreements in the condition the same is in and hereby certifies that said District has fully complied to its satisfaction with all the terms and conditions of said agreements.

2. Said District hereby specifically delivers and transfers to said City the possession and use of the following substations belonging to said City, to-wit:

H. N. May, Fullerton avenue east of the river.

R. A. Waller, 6345 Wentworth avenue.

No. 6, 712 South Halsted street.

No. 8, Rice and Lincoln streets.

Emerald, 3348 Emerald avenue.

Wood, old number 855 South Wood street, near 19th street.

Wentworth, 4762 Wentworth avenue.

Central Park avenue and Milwaukee avenue, rear of engine House No. 91.

Forty-second court and Irving Park boulevard, rear of Truck No. 23, Engine House No. 69.

together with the possession and use of all the transformers, regulators, meters, poles, conduits, towers, tools, appliances, and equipment used in and about said stations, except such equipment, appliances and tools as have been installed in or about said stations by the Sanitary District for its corporate purposes, and also all the transmission lines and cables used by said City to convey current to and from said stations, thereinafter for convenience called by the term "electrical equipment."

3. Said District hereby also specifically delivers and transfers to said City, the possession and use of the following substations constructed under the terms and conditions of said agreements and now belonging to said City, to-wit:

Wabansia avenue, corner Wabansia and Hamlin avenues.

West 22nd street, 3246 West 22nd street.

Mohawk street, corner of Mohawk and Menominee streets.

Byron street, corner of Byron street and Ravenswood avenue.

together with all the electrical equipment which was installed in said substations under the terms and conditions of said agreements, and said District also hereby specifically delivers and transfers to said City, the possession and use of the substation belonging to said City known as the Morgan Park substation together with all the electrical equipment installed therein.

4. Said District hereby specifically transfers and delivers to said City, all the electrical equipment which was installed in the Thirty-ninth street pumping station of said District under the terms and conditions of said agreements, a full and complete inventory of which is hereto attached marked "Exhibit A" and made a part hereof.

5. It is hereby understood and agreed by and between the parties hereto that by the terms of section one (1) of said agreement between the parties hereto, dated October 27, 1910, said City yielded to said District to be occupied by said District during the life of said agreement the following substations belonging to said City, to-wit:

Sedgwick street, corner of Chicago avenue.

Fullerton avenue, Fullerton avenue west of the river.

Byron street and Hermitage avenue, rear of Engine House No. 112.

Cortland street and Ballou street, rear of Engine House No. 7.

together with all the electrical equipment contained therein, but that in the work of rehabilitating the electric street lighting system of said City, the use of said stations by the District was discontinued and said stations together with the electrical equipment contained therein were at that time delivered and transferred to said City.

6. It is hereby further understood and agreed by and between the parties hereto, that in accordance with the terms and provisions of Section thirteen (13) of said original agreement dated October 27, 1910 the District turned over to either the City Electrician of said City or his successor the Commissioner of Gas and Electricity all the property, supplies, material, electrical devices and equipment belonging to said City, which were not needed or required to be

used in the reconstruction and operation of said electric lighting system of the City of Chicago.

7. Said City hereby agrees that all electrical equipment which has been or may be hereafter installed in any substation of said City and the grounds of the same by said District, and is now or may become the property of said District and is used by it in supplying electrical energy to other municipalities or commercial consumers, may remain in said substations as at present installed and connected rent free for the space occupied by the same during the period of this agreement. Said District, however, agrees to maintain and repair at its sole cost and expense, all such electrical equipment.

8. Said District hereby agrees that all electrical equipment which has been installed by the District for said City under the terms and conditions of said agreements, in the Thirty-ninth street pumping station of the District and the grounds of the same may remain as at present installed and connected rent free for the space occupied by the same, during the period of this agreement. Said City, however, agrees to operate, maintain and repair, at its sole cost and expense, all such electrical equipment.

9. Said City hereby agrees, that on the termination of this agreement by expiration of time or otherwise, said District shall be entitled to occupy rent free the space occupied by the electrical equipment specified in section seven (7) of this agreement for a period of six months after any such termination and for such further and additional time as may be necessary for the purpose of removing all the electrical equipment specified in said section seven (7).

10. The said District hereby agrees that, on the termination of this agreement by expiration of time or otherwise, said City shall be entitled to occupy rent free the space occupied by the electrical equipment specified in section eight (8) of this agreement for a period of six months after any such termination and for such further and additional time as may be necessary for the purpose of removing all the electrical equipment specified in said section eight (8).

11. Said City hereby gives and grants to said District, during the period of this agreement, the right to use, free of cost, all twelve thousand volt transmission lines or cables belonging to said City, used by said District in supplying electrical energy to the substations of said City. Said District hereby agrees to operate, maintain and repair, at its sole cost and expense, all such transmission lines or cables, provided, however, if any repairs to such transmission lines or cables are necessary by reason of the action of electrolysis then the cost of said repairs shall be borne by said City. The said District may itself perform the work above specified or may let contracts therefor to the lowest responsible bidder. The Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City, shall first jointly determine whether any repairs to such transmission lines or cables, are necessary by the action of electrolysis and if they so determine, then said District shall forthwith make such repairs and said City hereby agrees to pay the cost of the same on demand. In case the Electrical Engineer of said District and the Commissioner of Gas and Electricity are unable to jointly determine that said repairs are made necessary by the action of electrolysis then the determination of said question shall be referred to a Board of Arbitrators as provided for in section 45 of this agreement and the decision of said Board of Arbitrators shall be final and binding on both parties to the dispute.

12. In case said District itself, performs any work specified in this agreement for said City then the cost of the same shall be determined as follows:

The cost of material, supplies, electrical devices and equipment shall be the actual price paid for the same together with the standard charge of the District, for delivering said material and supplies and any and all material, electrical devices and equipment salvaged from said work to or from the site of the work. The cost of labor shall be taken as the amount paid for the same as shown by the payrolls and individual expense accounts of the District. To said items of cost there shall be added all sums of money which may be paid by the District to the employes of said District or their beneficiaries for first

aid, medical, surgical and hospital services and for the compensation provided for in the Act of the General Assembly of the State of Illinois relating to compensation for accidental injuries or deaths, and also the cost of insurance against injuries or deaths suffered by persons other than employes of said District by reason of performing any work specified in this agreement to be performed by said District for said City. To the total of said amounts shall be added an item of fifteen (15) per cent of same to cover superintendence, use of tools and other overhead expenses. In case the sum of money received by said District from said insurance is not equal to the sum of money said District is obliged to pay to persons other than employes who may be injured by reason of the performance of said work, or, in cases of death, to their beneficiaries, then said City agrees to pay to said District the difference between said sum of money received from said insurance and the sum of money said District may be obliged to pay to such persons or their beneficiaries. The various sums of money above specified in this paragraph 12 of this agreement to be paid by said City to said District shall hereinafter for convenience be called by the term "costs of construction." In case said District awards a contract for the performance of any work specified in this agreement then the cost of same shall be the contract price, together with such sums as may be jointly allowed said contractor by the Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City for extra work to the total of said amounts shall be added an item of five (5) per cent of same to cover superintendence and all other overhead expenses, which contract price and sums allowed for extras shall hereinafter for convenience be called by the term "contract costs". Any and all material, electrical devices and equipment salvaged in doing any work shall be turned over by said District to the Commissioner of Gas annd Electricity of said City at the store room and yard of said City located at No. 712 South Halsted street as the property of said City.

13. Said City hereby agrees to repair and maintain at its sole cost and expense the synchronous motors of said City located in the Halsted street, Rice and Lincoln streets and R. A. Waller substations. Said City hereby agrees to operate said motors within their respective rated capacities during the hours specified in the street lighting schedule Exhibits "B" and "C"; in such a manner and at such times as the Electrical Engineer of said District or his duly accredited representative shall direct and the said City hereby agrees to pay the sole cost and expense of such operation, with the exception of the cost of the electrical energy used in such operation, which electrical energy shall be furnished by said District to said City free of cost.

14. Said City hereby grants to said District the right during the period of this agreement to use, free of rent, therefor, the H. N. May substation of said City together with all steam producing, generating, transforming and other electrical equipment contained therein, and said District hereby agrees to maintain and keep during the period of this agreement said substation and said steam producing, generating, transforming and other equipment, in as good repair as when delivered to said District by said City, depreciation from ordinary wear and tear excepted.

15. It is understood and agreed by and between the parties hereto, that said City, has now under construction a new plant for the generation of electrical energy by steam known as the "Bridewell Plant" from which electrical energy will be transmitted into the existing electric street lighting system of said City and to new substations and lighting circuits now in the course of construction, for the purpose of affording to said City more electrical energy for street lighting, or other municipal purposes than at the present time exists. It is agreed by the parties hereto, that the new and existing electric light plants of said City and the existing light plants of said District may be interconnected in such a manner as may be agreed upon by the Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City, so that in case of an accident or in an emergency, electrical energy may be transmitted to the plant or plants of the party hereto requiring the same

by the plant or plants of the other party hereto.

16. It is further agreed by the parties hereto that either party may use, free of cost, such conduits, poles, and space in substations and the grounds connected therewith of the other party hereto, as the Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City shall jointly determine will not unnecessarily interfere with the use by the other party of such conduits, poles and space.

17. It is further understood and agreed by and between the parties hereto, that said District has supplied said City with electrical energy from December 8, 1917 to December 31, 1917, both dates inclusive, at the rate specified in said original agreement and has maintained and operated said substations from December 31, 1917, to March 31, 1918, both dates inclusive, in accordance with certain terms heretofore agreed upon between the parties hereto. Said City therefore, hereby agrees to pay said District on demand at the rate of Fifteen ($15.00) dollars per horse power a year or one dollar and twenty-five cents ($1.25) per horse power a month for all electrical energy delivered to said City between December 8, 1917, and December 31, 1917, both dates inclusive, said electrical energy to be metered at the primary side of said substations and to pay for all electrical energy consumed by said City between January 1, 1918 and the expiration of this agreement at the rate hereinafter specified. In addition thereto said City hereby agrees to pay said District on demand the actual cost of all salaries, labor, material and supplies furnished by said District in the maintenance and operation of said substations between December 8, 1917 and March 31, 1918, both dates inclusive, plus a sum equal to fifteen (15) per cent of such actual cost of salaries, labor, material and supplies.

18. Said City hereby agrees to repair, maintain and operate, at its sole cost and expense, during the term of this agreement all the substations of said City (except the H. N. May substation during the period it is under the control of said District) together with all the electrical equipment contained therein used in connection with the electric street lighting system of said City. In case said City shall delay or neglect or refuse to make any repairs to any of its equipment in its said substations necessary for the operation of equipment of said District connected therewith then said District may make such repairs or replacements to the equipment of said City at the cost of said City, said cost to be computed in the manner specified in section 12 of this agreement and paid to said District on the receipt of bills, therefor with interest thereon at the rate of five (5) per cent per annum until paid. Said City also agrees to operate, at its sole cost and expense, under the supervision and direction of the Electrical Engineer and the Load Dispatcher of said District, all the electrical equipment of said District in said substations.

19. Said District shall make such rearrangements or changes in the cables of said City as the Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City may agree are necessary and advisable. When such rearrangements or changes are made for the mutual benefit of said District and said City, said City shall pay to said District on demand its proportion of the actual cost of same; when any such rearrangements or changes are made for the sole benefit of said District, said District shall pay the cost of such work, and when any such rearrangements or changes are made for the sole benefit of said City, then said City shall pay to said District on demand the actual cost of such work, which cost in all instances shall be computed in the manner specified in section 12 of this agreement.

20. Said District hereby agrees to furnish and maintain, ready for use by said City, during the term of this agreement, which is hereby fixed for a period of five (5) years from the date hereof, for street lighting purposes, electrical energy in the form of three phase alternating current, delivered at a frequency of approximately sixty cycles per second and a difference of potential between phases of approximately 12,000 volts, to the amount of 10,000 kilowatts, which is hereinafter designated as the "firm power" and said City agrees to pay each month for said amount of elec-

trical energy, whether the same was used by said City in such month or not, subject, however, to any deductions from the total amount of electrical energy furnished said City under this agreement which may be allowed said City for interruption due to the causes specified in section 30 of this agreement.

21. In case said City, from time to time, requires the use of a greater amount of electrical energy for its said street lighting purposes than the firm power specified, then said District agrees to furnish and maintain, ready for use by said City, such greater amount as may be required, but not to exceed an amount of 2000 kilowatts in addition to said firm power. In case the said District is released from furnishing electric current to supply the 22nd street pumping station, then said firm power shall be increased to 11,000 Kilowatts and the greater amount of electric current to be furnished said City shall be increased to 2,600 Kilowatts. If any greater amount of electrical energy is furnished by said District to said City under this Section 21 of this agreement, then said City agrees to pay said District for such greater amount on the maximum demand basis specified in section 26 of this agreement.

22. The said District hereby agrees to furnish and maintain, for use by said City, the amount of electrical energy hereinabove specified each and every day of the term of this agreement during the hours specified in the tables hereto attached marked Exhibits "B" and "C" and Exhibit "D" and made a part hereof.

23. The said District hereby agrees to deliver said electrical energy in the manner specified in Section 22 of this agreement at the terminals of the disconnecting switches in the existing substations of said City.

Also to the terminals of the disconnecting switches of the electrical equipment installed in the Thirty-Ninth street pumping station of said District.

Also to the disconnecting switches in new substations to be constructed by said City known as "South Chicago," "Southwest" and any other substations which may be constructed by said City, provided said City furnishes and installs at its expense the necessary transmission lines or cables to transmit said electrical energy to said new and other substations.

24. The said City hereby agrees that all the electrical equipment used by said City in the operation of its street lighting system shall be suitable to receive the electrical energy furnished by said District and of standard design and construction, and shall be operated and maintained by said City, at its sole cost and expense, in a manner to secure and obtain the highest efficiency and best operation of said system and of the electrical system of said District. The said City also agrees to equip the lighting circuits of its electric lighting system and the 12,000 volt transmission circuits terminating in its stations and substations, with such approved protective devices as are in commercial use and to operate the same in such a manner as will protect the electrical equipment and circuits of said District from damage and interruptions in service, due to lightning, grounds, short circuits and other causes.

The Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City shall jointly determine whether the said equipment and operation are such as to meet the requirements of this section and in case they are unable to agree then the determination of such questions as have arisen hereunder shall be determined by arbitration as specified in Section 45 of this agreement.

25. The said City hereby agrees to pay said District for all electrical energy furnished said City hereunder at the rate of one dollar and twenty-five cents ($1.25) per Kilowatt per month on the number of Kilowatts constituting the maximum demand for the month, which maximum demand shall be determined as is specified in Section 26 of this agreement. Said District shall render monthly statements of the amount of electrical energy furnished to said City in accordance with the terms hereinbefore set forth and said City agrees to pay said District on or before the last day of each month for the electrical energy used by said City during the preceding month, and said City agrees that in case of failure, refusal or neglect on its part to make such payments at the time specified, then the

amounts due shall bear interest at five (5) per cent per annum until paid.

26. The maximum demand for any month shall be determined by maximum demand, curve-drawing or other instruments or meters installed by said District in the substations of said City, and shall be the highest average kilowatt demand indicated or recorded by said instruments or meters in any thirty-minute interval during such month. The maximum demand for billing purposes shall be the sum total of the maximum demand indicated or recorded by all of the instruments or meters used to measure the electrical energy furnished hereunder, but in no case shall the maximum demand be less than the firm power herein agreed to be purchased and paid for by said City.

27. The electrical energy furnished hereunder shall be measured at the points of delivery or the nearest available places. The instruments or meters for measuring said electrical energy shall be furnished, installed and maintained by said District at its sole cost and expense. The said City agrees to furnish sufficient space, rent free, in its substations for the installation of said instruments or meters and instrument transformers. Said instruments or meters with their instrument transformers may be connected to either the high tension or low tension side of the step-down transformers, or some may be connected to one side and some to the other side of said transformers as the Electrical Engineer of said District may elect. Whenever said instruments or meters are connected at other than the points of delivery of said electrical energy, the readings of said instruments or meters shall be corrected, so as to give readings such as would be obtained by such instruments or meters if they were connected at the point of delivery of said electrical energy.

28. The said District shall have the right at all times to inspect and test said instruments or meters, and if the same are found to be defective said District may repair or replace the same, at its option, provided five (5) days notice in writing is given by the Electrical Engineer of said District to the Commissioner of Gas and Electricity of said City of the intention of said District to test, repair or replace said instruments or meters, so that said City may have a representative present. Said City shall also have the right at all times to inspect and test said instruments and meters provided that five (5) days' notice in writing is given by the Commissioner of Gas and Electricity of said City to the Electrical Engineer of said District of the intention to make such test.

29. If, as a result of any such test any meter or meters are found to register in excess of two (2) percent above or below normal, then the readings of such meter or meters previously taken shall be corrected in accordance with the percentage of inaccuracy so found, but no such correction shall extend back beyond thirty (30) days previous to the date on which such inaccuracy shall be discovered by such test, and in case a prior test of such meter or meters shall have been made within 30 days of the date on which such inaccuracy is discovered under the provisions hereof, then the correction of the readings shall not extend back beyond the date of such prior test. If any test shall be made at the request of said City with the result that the meter or meters tested shall be found to register correctly or within two (2) percent of normal the City shall bear the expense of such test. The expense of all other tests shall be borne by the District. During the time that any meter or meters are out of service it shall be assumed that the registrations of such meters are the average of the registrations of such meters for the other days of the month.

30. In case the District shall be prevented from furnishing and delivering said electrical energy, or in case the City shall be prevented from receiving said electrical energy at any of its substations by strikes, riots, insurrections, floods, fires, lightning, explosions, acts of third parties, acts of the State or Federal Authorities, War Boards or Councils or from any other cause reasonably beyond the control of either party hereto, then said District shall not be obliged to furnish and deliver such electrical energy at such substations, and the City shall not be obliged to receive such electrical energy, during the period of interruption of service, but

nothing herein contained shall be construed to permit said District to refuse to furnish and deliver said electrical energy or permit said City to refuse to receive the same as soon as the cause of interruption of service is removed and each of the parties hereto shall be prompt and diligent in removing and overcoming such cause or causes.

31. It is hereby expressly agreed by and between the parties hereto that if, for any of the reasons specified in section 30 of this agreement there is an interruption of the supply of electrical energy herein specified to be furnished and delivered by said District lasting for a period of seven hours or more, then said City shall not be required to pay for any electrical energy not received at any of its substations during the period of any such interruption of service. The amount of electrical energy which said City shall not be required to pay for by reason of such interruption of service shall be the average of the maximum demand of any and all stations which are so prevented from receiving such electrical energy for the three months preceding the month in which such interruption of service may have occurred. Said District shall not be liable for a failure to furnish and deliver electrical energy to said City during the period of any such interruption of service.

32. The said District hereby agrees to furnish all materials, supplies, electrical equipment and labor that are necessary to rearrange, change, protect or rebuild all exposed or unprotected transmission lines, lighting circuits, cables or other electrical equipment which are now in place, under, in or on viaducts and elevated structures, subways and in streets, alleys or public places of said City connecting therewith so as to safeguard the public and minimize the liability of personal injuries resulting from electrical energy passing through the same at a total cost of not to exceed $80,000.00; and also agrees to paint the electric light poles and equipment thereon belonging to said City at a total cost of not to exceed $60,000.00. The cost of doing said work to be computed in the manner specified in section 12 of this agreement. The said District may itself perform the work above specified or let contracts therefor to the lowest responsible bidder and said City hereby agrees to furnish to said District free of cost all permits which may be necessary to perform the work specified in this agreement.

In case any such work is required at such places and under such conditions as will make it necessary (by reason of ordinances, existing contracts, or for any other reason) to have the work or a part of same done by the City, by railroad or other public service corporations, or by contractors who have agreed to maintain streets under the terms of paving contracts, then the cost of such work or such parts of same as may be thus performed by them shall be paid by said District and shall thereupon become part of the "contract costs" specified in section 12 of this agreement, and shall be repaid to said District by said City as specified in this agreement.

33. It is further agreed by and between the parties hereto that no part of the above specified work shall be done by said District itself, or no contract for same shall be let or awarded by said District to the lowest responsible bidder therefor until complete plans and specifications for such part and the form of contemplated contract therefor shall have been prepared by the Commissioner of Gas and Electricity of said City and submitted to and approved by the Electrical Engineer of said District.

34. It further agreed by and between the parties hereto that during the progress of any work performed by said District or any of its Contractors therefor under any of the terms and provisions of this agreement that the Commissioner of Gas and Electricity of said City shall have the right to inspect, at the sole cost and expense of said City, all materials, supplies and electrical equipment used in such construction work or any other work done under the terms of this agreement and to reject any and all such materials, supplies and electrical equipment which in his opinion do not conform to the plans and specifications prepared therefor.

35. Said District hereby agrees to render monthly statements of the amounts of money expended during each and every month of the life of

this agreement for the costs of construction and contract costs of the work above specified in accordance with the terms and provisions hereinbefore set forth in the following manner:

(a) Said District shall enter in its books of account all expenditures made and credits received by it on account of the costs of construction and contract costs or other costs of the work herein specified, which books of account shall at all reasonable hours be open to the inspection of the Comptroller of said City and to such person or persons as the Comptroller or City Council of said City may designate.

(b) Said District shall furnish to said City within thirty (30) days after the close of each and every month during the period when the work above specified is in progress a full and complete itemized statement of the costs of construction and contract costs for and on account of the work done by said District for said City during the preceding month.

(c) On the first day of January of each and every year following the months in which the work is performed as shown by said itemized statements rendered by said District to said City, said City shall pay to said District five (5) per cent interest on the monthly costs of construction and contract costs shown by said itemized statements at the rate of five (5) per cent per annum from the date of said statements to December 31 of the year in which said costs of construction or contract costs were made and thereafter the City shall pay five (5) per cent interest on said monthly costs of construction and contract costs from said December 31, until said monthly costs of construction and contract costs are paid.

(d) The total costs of construction and contract costs expended by said District under the terms of this agreement during the year 1919 as shown by said monthly statements shall be repaid by said City to said District on April 1, 1920 with interest thereon as herein specified.

(e) The total costs of construction and contract costs expended by said District under the terms of this agreement during the year 1920 as shown by said monthly statements shall be repaid by said City to said District on April 1, 1921 with interest thereon as herein specified.

(f) The total costs of construction and contract costs expended by said District under the terms of this agreement during the year 1921 as shown by said monthly statements shall be repaid by said City to said District on April 1 1922 with interest thereon as herein specified.

(g) The total costs of construction and contract costs expended by said District under the terms of this agreement during the year 1922 as shown by said monthly statements shall be repaid by said City to said District on April 1, 1923 with interest thereon as herein specified.

36. It is hereby understood and agreed by and between the parties hereto that in case said Commissioner of Gas and Electricity of said City shall fail, refuse or neglect to examine and approve or disapprove said monthly statements within thirty (30) days after the receipt of same then said monthly statements shall be assumed to be correct and the work therein shown whether performed by the District itself or by other parties, shall be considered accepted by said City.

In the event that any question or dispute shall arise within said period of thirty days, concerning the performance of the work to be done under this agreement, then such question or dispute may be determined by arbitration in the manner specified in section 45 of this agreement.

37. Said District hereby agrees to advance to said City, the sum of $1,101.80 to be used by said City in paying a bill of the Chicago Union Station Company for material, supplies and labor furnished by said Company for the installation of two additional ducts for said City on Harrison street, from the manhole on Canal street to the manhole at the City's shaft near the west bank of the Chicago River, which work should have been performed by said District, but was ordered done by said Chicago Union Station Company. The said City hereby agrees to repay said sum of $1,101.80 to said District on April 1, 1920 with interest thereon at the rate of five (5) per cent per annum from the time said sum is paid to said City by said District until said sum is repaid by said City to said District

38. Said City hereby assumes (Except as otherwise provided in the paragraphs of this section thirty-eight (38) all responsibility for all loss, damage or expense to persons or property which may in any wise directly or indirectly be occasioned by the following:

(a) In the making of repairs, replacements or betterments by said District to all twelve thousand volt transmission lines or cables belonging to said City and used by said District which are rendered necessary by the action of electrolysis and from the electrical energy escaping from or passing through said transmission lines or cables because of such electrolysis.

(b) In the operation, maintenance and repair by said City of the electrical equipment installed by said District for said City in the Thirty-Ninth street pumping station of said District and from electrical energy escaping from or passing through said electrical equipment.

(c) In the operation, maintenance and repair of all the substations of said City (except the H. N. May substation during the period it is under the exclusive control of said District) together with all the electrical equipment contained therein, and from electrical energy escaping from or passing through said substations and electrical equipment.

(d) In the operation, maintenance and repair of the entire street lighting system of said City (except to the extent the said District has herein assumed the operation, maintenance and repair and the making of all necessary betterments or replacements to the twelve thousand volt cables of said City) including all distributing lines, arc circuits and all electrical equipment used in connection therewith, and from all electrical energy escaping therefrom or passing through the same.

(e) In the operation by said City of the electrical equipment of said District which has been installed by said District for its own use in the substations of said City and grounds connected therewith, and from all electrical energy escaping from said equipment because of the negligent operation of the same by the employes of said City.

(f) In the use by said City of conduits and poles of said District and use of space in the substations of said District and on the grounds connected therewith, and from all electrical energy escaping from said conduits and poles so used by said City if caused by such use.

And said City agrees and does hereby undertake to indemnify and save harmless said District from all liability therefor.

39. Said City hereby agrees to indemnify and save the said District harmless from all judgments, damages, costs or expenses which may be sustained by said District by reason of suits for damages against said District brought by Bertram Stedwell, a minor, by John Stedwell, his father and next friend, for personal injuries; John Stedwell for loss of services, earnings and expenses; Edward Salow, a minor, by Marie Salow, his next friend, for personal injuries; James F. Bishop, Administrator of the Estate of Arthur R. Anderson, deceased, for causing the death of Arthur R. Anderson; by Arthur Meyer, by E. J. Meyer, his father and next friend for personal injuries; John Mango, by Antonio Mango, his father and next friend, for personal injuries; Lucy Potter, for personal injuries; Lillian Rice, by John Rice, her father and next friend; Hans C. Anderson, by Mrs. B. Anderson, his next friend, for personal injuries; Edward Ottenhoff, by Conrad Ottenhoff, his next friend, for personal injuries; and Henry A. Fowler, Administrator of the Estate of Leo Kasmala, deceased, for causing the death of Leo Kasmala; and by reason of other suits for damages for personal injuries, deaths or loss of services, earnings and expenses, which may now be pending, or which may at any time hereafter be brought against said District by any person or persons, or his or their representatives, wherein it is claimed that the said District is liable either solely, jointly with said City or jointly with said City and others for damages for personal injuries, death or loss of services, earnings and expenses alleged to have been caused directly or indirectly by electrical energy generated by said District and transmitted over or through or escaping from the street lighting system of said City, including all transmission and distribution wires, arc

circuits and all electrical equipment owned or controlled by said City and used in connection therewith; and by reason of any other suits wherein it is claimed that said District is jointly or severally liable for damages for personal injuries, death, or loss of services, earnings and expenses alleged to have been caused by the negligent operation, (or) maintenance and (or) repair of the entire street lighting system of said City, including all transmission and distribution wires, arc circuits and all electrical equipment owned or controlled by said City and used in connection therewith; and also from all costs and expenses incurred by said District in defending said suits above specifically named, such other suits, or any of them.

40. Said District hereby assumes (except as otherwise provided in the paragraphs of this section forty (40) all responsibility for all loss, damage or expense to persons or property which may in any wise directly or indirectly be occasioned by the following:

(a) In the operation, maintenance and repair and the making of all necessary replacements and betterments by said District to all twelve thousand volt transmission lines or cables belonging to said City and used by said District in the furnishing and delivering of electrical energy over said transmission lines or cables, except such repairs and the making of all replacements and betterments to such transmission lines or cables rendered necessary by the action of electrolysis, and excepting loss, damage or expense occasioned by the electrical energy escaping from or passing through said transmission lines or cables by reason of electrolysis.

(b) In the use, operation and repair by said District of the H. N. May substation and the steam producing, generating, transforming and other equipment contained therein and all electrical energy escaping from or passing through the same during the period said substation and equipment is under the exclusive control of said District.

(c) In the maintenance and repair by said District of all electrical equipment which has been installed by said District in the substations of said City and on the grounds connected therewith and from all electrical energy escaping therefrom due to a lack of proper installation, maintenance and repair.

(d) To the use by said District of conduits and poles of said City and space in the substation of said City and on the grounds connected therewith and from all electrical energy escaping from said conduits and poles so used by said District of caused by such use.

And said District agrees and does hereby undertake to indemnify and save harmless said City from all liability therefor.

41. All questions as to liability for all loss or damage to persons or property not herein specifically assumed by the respective parties hereto due to the concurring negligence, wrongful act or omission of the respective parties hereto or their officers, agents, employees or contractors and the money to be paid therefor, if any, by the respective parties hereto shall be submitted to arbitration in the same manner as hereinafter specified in section forty-five (45) of this agreement. Such arbitration shall include any question or dispute which may arise as to whether any case comes within the expressly assumed obligation of either of the parties hereto.

42. In case a suit or suits shall be begun against either party hereto for or on account of any alleged damage or injury for which, under the terms of this agreement, the other party hereto shall be liable, in whole or in part, the party so sued shall give to the other party reasonable notice in writing of the pendency of such suit, and thereupon the other party shall and will assume the defense of said suit or participate in its defense, and shall and will save harmless the party so sued from all loss, costs and expense of defending such suit, or from its proportion thereof, as the case may be. In case a suit or suits shall be begun against both parties hereto for or on account of any alleged damage or injury for which, under the terms of this agreement, one of the parties hereto shall be solely liable, then thereupon the party so liable shall and will assume the defense of said suit or suits for both parties hereto, and shall and will save harmless the other party hereto from all

loss, cost or expense in defending said suit or suits. If in any suit either party hereto as defendant therein shall be compelled to pay any judgment which, under the provisions of this agreement, the other party hereto should have paid or should have participated in the payment of, then the other party so solely or jointly liable shall on demand promptly repay to it any money which it shall have so paid, whether in the way of damages, costs, fees or other expenses. If any party sole defendant shall be jointly liable with the party notified then the latter shall reimburse the party sole defendant to the extent and in the proportion that it may be required to bear or participate in such liability as hereinbefore provided, to be determined by arbitration as specified in Section forty-five (45) of this agreement.

43. Each party hereto shall give notice in writing to the other party hereto of any claim in excess of $50.00 made upon it for which such other party may be solely or jointly liable under the terms hereof, and no claim in excess of $50.00 shall be settled by either party hereto without the consent of the party so notified unless the latter shall for fifteen days after receipt of notice neglect to give consent or within said time shall advise that such claim will not be contested, in either of which cases, as well as with respect to all claims of $50.00 or less, the party to whom same shall be presented may make settlement for the account of the party liable under the terms of this agreement therefor, for which the latter agrees upon demand to reimburse the party so making payment; and in making such voluntary settlements the party making the same shall procure, from each claimant, a release in behalf of all parties concerned from liability in the premises.

44. In every case of death or injury suffered by employes of the respective parties hereto in carrying out the terms and provisions of this agreement, where under any law first aid, medical, surgical and hospital services are required to be furnished and compensation to be paid any such employes or his beneficiary, the party hereto whose employe is injured or suffers death shall make payment in accordance therewith and the other party hereto agrees (if under the terms of this agreement it is responsible for such injury or death) to reimburse the party making such payment for all payments so made whether initial or successive periodical payments.

45. In case the Electrical Engineer of said District and the Commissioner of Gas and Electricity of said City shall be unable to determine that repairs to the twelve thousand volt transmission lines or cables belonging to said City, and used by said District in supplying the electrical energy to the substations of said City, are rendered necessary by the action of electrolysis then said question shall be referred to a Board of Arbitrators consisting of three competent engineers, one of whom shall be chosen by said District, another by said City and the third shall be selected by the two so chosen. The party desiring such arbitration shall give written notice to the other party to the dispute setting forth definitely the point or points of dispute and naming the party selected by such party to act as its arbitrator. If the party on whom such notice is served shall for twenty (20) days thereafter neglect to name a person as its arbitrator, then the party giving such notice may request the then Chief Justice of the Circuit Court of Cook County to name an arbitrator in behalf of the party so in default, and such Judge is hereby given full power and authority to designate and name an arbitrator for the party so in default. Upon the naming of such arbitrators, the two so chosen shall name a third, and such Board of Arbitrators shall proceed immediately to hear and decide the matter or matters in dispute. The decision of such Board of Arbitrators or the majority of them shall be final and conclusive on the parties hereto. Each party hereto shall compensate the arbitrator selected by it or appointed by the court in its behalf, and one-half of the compensation of the third arbitrator shall be paid by each of the parties to the dispute. The arbitrators in making any decision shall be governed strictly by the terms of this agreement.

It is further agreed that if any dispute or controversy shall arise between the parties hereto concerning

W.

MBER		OCTOBER			NOVEMBER			DECEMBER			
ff	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
:34	9:59	6:43	6:06	11:23	4:55	5:42	12:47	4:30	6:18	13:48	1
:35	10:02	:41	:07	:26	:54	:43	:49	:30	:19	:49	2
:38	:05	:39	:08	:29	:53	:45	:52	:30	:20	:50	3
:39	:09	:38	:10	:32	:51	:46	:55	:29	:22	:53	4
:40	:12	:36	:11	:35	:50	:48	:58	:29	:23	:54	5
:41	:15	:34	:12	:38	:49	:49	13:00	:29	:24	:55	6
:42	:17	:33	:13	:40	:48	:50	:02	:29	:25	:56	7
:43	:20	:31	:14	:43	:47	:51	:04	:29	:26	:57	8
:44	:23	:29	:15	:46	:46	:52	:06	:29	:26	:57	9
:44	:25	:28	:15	:47	:45	:53	:08	:29	:26	:57	10
:45	:27	:26	:16	:50	:44	:54	:10	:29	:28	:59	:11
:46	:30	:25	:18	:53	:43	:55	:12	:29	:28	:59	12
:47	:33	:23	:19	:56	:42	:58	:16	:29	:30	14:01	13
:48	:35	:21	:21	12:00	:41	:59	:18	:30	:31	:01	14
:49	:38	:20	:22	:02	:40	6:00	:20	:30	:32	:02	15
:51	:42	:18	:23	:05	:39	:01	:22	:30	:32	:02	16
:52	:45	:16	:25	:09	:38	:02	:24	:30	:32	:02	17
:53	:48	:15	:26	:11	:37	:03	:26	:31	:33	:02	18
:54	:50	:13	:27	:14	:37	:03	:26	:31	:34	:03	19
:54	:52	:12	:27	:15	:36	:05	:29	:32	:35	:03	20
:55	:55	:10	:28	:18	:35	:06	:31	:32	:35	:03	21
:56	:58	:09	:30	:21	:35	:08	:33	:33	:36	:03	22
:57	11:00	:07	:31	:24	:34	:10	:36	:33	:36	:03	23
:59	:04	:06	:33	:27	:33	:11	:38	:34	:36	:02	24
:00	:07	:04	:34	:30	:33	:12	:39	:34	:36	:02	25
:01	:09	:03	:35	:32	:32	:13	:41	:35	:37	:02	26
:02	:12	:02	5:37	:35	:32	:15	:43	:36	:37	:01	:27
:04	:16	5:00	:38	:38	:31	:16	:45	:37	:38	:01	28
:05	:19	4:59	:39	:40	:31	:16	:45	:37	:38	:01	29
:05	:21	:58	:39	:41	:30	:17	:47	:38	:38	14:00	30
....	.....	:56	:40	:44	.....	.....	.....	:39	:38	13:59	31
1–08		374–24			399–42			433–27			
1–40		12–05			13–19			13–58			

CITY OF CHICAGO

MUNICIPAL ELECTRIC STREET LIGHTING

SCHEDULE

ZONE—1

Drawing No. 8040-A

June 14-09

Revised Jan. 15, 1918

Revised for 1918. 3-26-18. G. F. W.

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			
Day	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
1	4:40	6:39	13:59	5:16	6:23	13:07	5:51	5:46	11:55	7:26	5:52	10:26	7:59	5:06	9:07	8:28	4:37	8:09	8:39	4:38	7:59	8:19	5:04	8:45	7:35	5:34	9:59	6:43	6:06	11:23	4:55	5:42	12:47	4:30	6:18	13:48	1
2	:41	:39	:58	:17	:22	:05	:52	:43	:51	:27	:51	:24	8:00	:05	:05	:29	:37	:08	:38	:40	8:02	:18	:04	:46	:33	:35	10:02	:41	:07	:26	:54	:43	:49	:30	:19	:49	2
3	:42	:39	:57	:18	:20	:02	:53	:41	:48	:28	:49	:21	:01	:03	:02	:30	:37	:07	:38	:40	:02	:17	:05	:48	:31	:38	:05	:39	:08	:29	:53	:45	:52	:30	:20	:50	3
4	:43	:39	:56	:20	:20	13:00	:54	:40	:46	:29	:47	:18	:02	:02	9:00	:31	:37	:06	:38	:41	:03	:15	:06	:51	:30	:39	:09	:38	:10	:32	:51	:46	:55	:29	:22	:53	4
5	:43	:39	:56	:21	:19	12:58	:55	:38	:43	:30	:46	:16	:03	:02	8:59	:31	:36	:05	:38	:41	:03	:14	:08	:54	:28	:40	:12	:36	:11	:35	:50	:48	:58	:29	:23	:54	5
6	:44	:38	:54	:22	:18	:56	:57	:37	:40	:31	:44	:13	:04	5:00	:56	:32	:36	:04	:38	:42	:04	:13	:09	:56	:26	:41	:15	:34	:12	:38	:49	:49	13:00	:29	:24	:55	6
7	:45	:38	:53	:23	:17	:54	:58	:36	:38	:33	:43	:10	:05	4:59	:54	:32	:35	:03	:38	:43	:05	:12	:10	:58	:25	:42	:17	:33	:13	:40	:48	:50	:02	:29	:25	:56	7
8	:46	:38	:52	:25	:16	:51	:59	:34	:35	:34	:42	:08	:06	:58	:52	:33	:35	:02	:37	:43	:06	:10	:11	9:01	:23	:43	:20	:31	:14	:43	:47	:51	:04	:29	:26	:57	8
9	:47	:37	:50	:26	:14	:48	6:00	:33	:33	:35	:40	:05	:07	:57	:50	:34	:34	8:00	:37	:43	:06	:09	:12	:03	:21	:44	:23	:29	:15	:46	:46	:52	:06	:29	:24	:57	9
10	:48	:37	:49	:27	:12	:45	:01	:31	:30	:36	:38	:02	:08	:56	:48	:34	:34	8:00	:36	:43	:07	:08	:13	:05	:19	:44	:25	:28	:15	:47	:45	:53	:08	:29	:26	:57	10
11	:49	:37	:48	:29	:10	:41	:03	:29	:26	:37	:36	9:59	:09	:54	:45	:35	:34	7:59	:36	:44	:08	:06	:13	:07	:18	:45	:27	:26	:16	:50	:44	:54	:10	:29	:28	:59	11
12	:51	:36	:45	:30	:09	:39	:04	:27	:25	:38	:31	:56	:10	:53	:13	:35	:34	:59	:35	:46	:11	:05	:14	:09	:16	:46	:30	:25	:18	:53	:43	:55	:12	:29	:28	:59	12
13	:52	:36	:44	:31	:08	:37	:05	:25	:20	:39	:33	:54	:11	:52	:11	:36	:35	:59	:35	:47	:12	:04	:15	:11	:14	:47	:33	:23	:19	:56	:42	:58	:16	:29	:30	14:01	13
14	:53	:36	:43	:33	:08	:35	:06	:23	:17	:40	:31	:51	:12	:51	:39	:36	:35	:59	:34	:47	:13	:02	:16	:14	:13	:18	:35	:21	:21	12:00	:41	:59	:18	:30	:31	:01	14
15	:54	:36	:42	:34	:07	:33	:07	:22	:15	:41	:30	:49	:13	:51	:38	:37	:35	:58	:34	:48	:14	:01	:17	:16	:11	:49	:38	:20	:22	:02	:40	6:00	:20	:30	:32	:02	15
16	:55	:36	:41	:35	:05	:30	:08	:21	:13	:43	:29	:46	:14	:50	:36	:37	:35	:58	:33	:49	:16	8:00	:19	:19	:09	:51	:42	:18	:23	:05	:39	:01	:22	:30	:32	:02	16
17	:56	:35	:39	:36	:03	:27	:09	:19	:10	:44	:27	:43	:15	:49	:34	:37	:35	:58	:32	:49	:17	7:58	:19	:21	:07	:52	:45	:16	:25	:09	:38	:02	:24	:30	:32	:02	17
18	:58	:34	:36	:37	:02	:25	:10	:17	:07	:45	:26	:41	:16	:48	:32	:38	:35	:57	:32	:49	:17	:57	:21	:24	:05	:53	:48	:15	:26	:11	:37	:03	:26	:31	:33	:02	18
19	5:00	:34	:34	:39	:01	:22	:12	:16	:04	:46	:24	:38	:17	:47	:30	:38	:35	:57	:31	:51	:20	:55	:22	:27	:04	:54	:50	:13	:27	:14	:37	:03	:26	:31	:34	:03	19
20	:01	:33	:32	:40	5:59	:19	:13	:14	:01	:47	:23	:36	:18	:16	:28	:39	:35	:56	:30	:51	:21	:54	:23	:29	:02	:54	:52	:12	:27	:15	:36	:05	:29	:32	:35	:03	20
21	:02	:32	:30	:41	:57	:16	:14	:12	16:58	:48	:20	:32	:19	:14	:25	:39	:35	:56	:30	:52	:22	:52	:23	:31	7:00	:55	:55	:10	:28	:18	:35	:06	:31	:32	:35	:03	21
22	:03	:31	:28	:42	:56	:14	:15	:10	:55	:49	:18	:29	:20	:13	:23	:39	:35	:56	:29	:54	:25	:51	:24	:33	6:58	:56	:58	:09	:30	:21	:35	:08	:33	:33	:36	:03	22
23	:04	:31	:27	:44	:54	:10	:16	:08	:52	:50	:17	:27	:21	:13	:22	:39	:35	:56	:28	:55	:27	:49	:25	:36	:57	:57	11:00	:07	:31	:21	:34	:10	:36	:33	:36	:03	23
24	:05	:30	:25	:45	:54	:09	17	:06	:49	:51	:16	:25	:22	:12	:20	:39	:37	:58	:27	:56	:29	:48	:26	:38	:55	:59	:01	:06	:33	:27	:33	:11	:38	:34	:36	:02	24
25	:07	:30	:23	:46	:52	:06	:18	:05	:47	:52	:15	:23	:22	:12	:20	:39	:37	:58	:26	:57	:31	:46	:28	:42	:53	6:00	:07	:04	:31	:30	:33	:12	:39	:34	:36	:02	25
26	:08	:29	:21	:47	:51	:04	:19	:04	:45	:53	:14	:21	:23	:12	:19	:39	:37	:58	:25	:58	:33	:44	:29	:45	:52	:01	:09	:03	:35	:32	:32	:13	:41	:35	:37	:02	26
27	:09	:27	:18	:48	:49	:01	:20	:02	:42	:54	:13	:19	:24	:11	:17	:39	:37	:58	:24	:58	:34	:43	:30	:17	:50	:02	:12	:02	:58	:35	:32	:15	:43	:36	:37	:01	27
28	:10	:27	:17	:49	:17	11:58	:21	5:00	:39	:55	:11	:16	:25	:10	:15	:39	:37	:58	:23	:59	:36	:41	:31	:50	:48	:01	:16	5:00	:58	:38	:31	:16	:45	:37	:38	:01	28
29	:12	:27	:15				:23	4:59	:36	:57	:10	:13	:26	:10	:14	:39	:37	:58	:22	5:00	:38	:40	:32	:52	:46	:05	:19	4:59	:39	:40	:31	:16	:45	:37	:38	:01	29
30	:13	:26	:13				:24	:57	:33	:58	:08	:10	:27	:09	:12	:39	:38	:59	:21	:01	:40	:38	:33	:55	:44	:05	:21	:58	:39	:41	:30	:17	:47	:38	:38	14:00	30
31	:14	:24	:10				:25	5:55	:30				:27	:07	:10				:20	:02	:42	:36	:33	:57				:56	:40	:44				:39	:38	13:59	31
Total	422 35			351 32			347 21			293 51			266 54			239–59			256–57			289–10			320 08			374 24			399–42			433–27			
Av.	13 37			12 33			11–12			9–46			8–36			8–00			8–17			9–19			10–40			12 05			13–19			13 58			

Total Time for Year = 4015 Hours.

Average Time for Night = 11 Hours.

W.

MBER		OCTOBER			NOVEMBER			DECEMBER			
ff	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
19	9:29	6:58	5:51	10:53	5:10	5:27	12:17	4:45	6:03	13:18	1
20	:32	:56	:52	:56	:09	:28	:19	:45	:04	:19	2
21	:35	:54	:53	:59	:08	:30	:22	:45	:05	:20	3
24	:39	:53	:55	11:02	:06	:31	:25	:44	:07	:23	4
25	:42	:51	:56	:05	:05	:33	:28	:44	:08	:24	5
26	:45	:49	:57	:08	:04	:34	:30	:44	:09	:25	6
27	:47	:48	:58	:10	:03	:35	:32	:44	:10	:26	7
28	:50	:46	:59	:13	:02	:36	:34	:44	:11	:27	8
29	:53	:44	6:00	:16	:01	:37	:36	:44	:11	:27	9
29	:55	:43	:00	:17	:00	:38	:38	:44	:11	:27	10
30	:57	:41	:01	:20	4:59	:39	:40	:44	:13	:29	11
31	10:00	:40	:03	:23	:58	:40	:42	:44	:13	:29	12
32	:03	:38	:04	:26	:57	:43	:46	:44	:15	:31	13
33	:05	:36	:06	:30	:56	:44	:48	:45	:16	:31	14
34	:08	:35	:07	:32	:55	:45	:50	:45	:17	:32	15
36	:12	:33	:08	:35	:54	:46	:52	:45	:17	:32	16
37	:15	:31	:10	:39	:53	:47	:54	:45	:17	:32	17
38	:18	:30	:11	:41	:52	:48	:56	:46	:18	:32	18
39	:20	:28	:12	:44	:52	:48	:56	:46	:19	:33	19
39	:22	:27	:12	:45	:51	:50	:59	:47	:20	:33	20
40	:25	:25	:13	:48	:50	:51	13:01	:47	:20	:33	21
41	:28	:24	:15	:51	:50	:53	:03	:48	:21	:33	22
42	:30	:22	:16	:54	:49	:55	:06	:48	:21	:33	23
44	:34	:21	:18	:57	:48	:56	:08	:49	:21	:32	24
45	:37	:19	:19	12:00	:48	:57	:09	:49	:21	:32	25
46	:39	:18	:20	:02	:47	:58	:11	:50	:22	:32	26
47	:42	5:17	5:22	:05	:47	6:00	:13	:51	:22	:31	27
49	:46	5:15	:23	:08	:46	:01	:15	:52	:23	:31	28
50	:49	:14	:24	:10	:46	:01	:15	:52	:23	:31	29
50	:51	:13	:24	:11	:45	:02	:17	:53	:23	:30	30
...	.....	:11	:25	:14	.....	.....	.....	:54	:23	:29	31
5–08		358–54			384–42			417–57			
9–10		11–35			12–49			13–29			

May 22, 621-B 1919

CITY OF CHICAGO

MUNICIPAL ELECTRIC STREET LIGHTING

SCHEDULE

ZONE—2

Drawing No. 8040-B

Jan. 15, 1918

Revised for 1918. 3-26-18. G. F. W.

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			
Day	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
1	4:55	6:24	13:29	5:31	6:08	12:37	6:06	5:31	11:25	7:41	5:37	9:56	8:14	4:51	8:37	8:43	4:22	7:39	8:54	4:23	7:29	8:34	4:49	8:15	7:50	5:19	9:29	6:58	5:51	10:53	5:10	5:27	12:17	4:45	6:03	13:18	1
2	:56	:24	:28	:32	:07	:35	:07	:28	:21	:42	:36	:54	:15	:50	:35	:44	:22	:38	:53	:25	:32	:33	:49	:16	:48	:20	:32	:56	:52	:56	:09	:28	:19	:45	:04	:19	2
3	:57	:24	:27	:33	:05	:32	:08	:26	:18	:43	:34	:51	:16	:48	:32	:45	:22	:37	:53	:25	:32	:32	:50	:18	:46	:21	:35	:54	:53	:59	:08	:30	:22	:45	:05	:20	3
4	:58	:24	:26	:35	:05	:30	:09	:25	:16	:44	:32	:48	:17	:47	:30	:46	:22	:36	:53	:26	:33	:30	:51	:21	:45	:24	:39	:53	:55	11:02	:06	:31	:25	:44	:07	:23	4
5	:58	:24	:26	:36	:04	:28	:10	:23	:13	:45	:31	:46	:18	:47	:29	:46	:21	:35	:53	:26	:33	:29	:53	:24	:43	:25	:42	:51	:56	:05	:05	:33	:28	:44	:08	:24	5
6	:59	:23	:24	:37	:03	:26	:12	:22	:10	:46	:29	:43	:19	:45	:26	:47	:21	:34	:53	:27	:34	:28	:54	:26	:41	:26	:45	:49	:57	:08	:04	:34	:30	:44	:09	:25	6
7	5:00	:23	:23	:38	:02	:24	:13	:21	:08	:48	:28	:40	:20	:44	:24	:47	:20	:33	:53	:28	:35	:27	:55	:28	:40	:27	:47	:48	:58	:10	:03	:35	:32	:44	:10	:26	7
8	:01	:23	:22	:40	:01	:21	:14	:19	:05	:49	:27	:38	:21	:43	:22	:48	:20	:32	:52	:28	:36	:25	:56	:31	:38	:28	:50	:46	:59	:13	:02	:36	:34	:44	:11	:27	8
9	:02	:22	:20	:41	5:59	:18	:15	:18	:03	:50	:25	:35	:22	:42	:20	:49	:19	:30	:52	:28	:36	:24	:57	:33	:36	:29	:53	:44	6:00	:16	:01	:37	:36	:44	:11	:27	9
10	:03	:22	:19	:42	:57	:15	:16	:16	:00	:51	:23	:32	:23	:41	:18	:49	:19	:30	:51	:28	:37	:23	:58	:35	:34	:29	:55	:43	:00	:17	:00	:38	:38	:44	:11	:27	10
11	:04	:22	:18	:44	:55	:11	:18	:14	10:56	:52	:21	:29	:24	:39	:15	:50	:19	:29	:51	:29	:38	:21	:58	:37	:33	:30	:57	:41	:01	:20	4:59	:39	:40	:44	:13	:29	11
12	:06	:21	:15	:45	:54	:09	:19	:12	:53	:53	:19	:26	:25	:38	:13	:50	:19	:29	:50	:31	:41	:20	:59	:39	:31	:31	10:00	:40	:03	:23	:58	:40	:42	:44	:13	:29	12
13	:07	:21	:14	:46	:53	:07	:20	:10	:50	:54	:18	:24	:26	:37	:11	:51	:20	:29	:50	:32	:42	:19	5:00	:41	:29	:32	:03	:38	:04	:26	:57	:43	:46	:44	:15	:31	13
14	:08	:21	:13	:48	:53	:05	:21	:08	:47	:55	:16	:21	:27	:36	:09	:51	:20	:29	:49	:32	:43	:17	:01	:44	:28	:33	:05	:36	:06	:30	:56	:44	:48	:45	:16	:31	14
15	:09	:21	:12	:49	:52	:03	:22	:07	:45	:56	:15	:19	:28	:36	:08	:52	:20	:28	:49	:33	:44	:16	:02	:46	:26	:34	:08	:35	:07	:32	:55	:45	:50	:45	:17	:32	15
16	:10	:21	:11	:50	:50	:00	:23	:06	:43	:58	:14	:16	:29	:35	:06	:52	:20	:28	:48	:34	:46	:15	:04	:49	:24	:36	:12	:33	:08	:35	:54	:46	:52	:45	:17	:32	16
17	:11	:20	:09	:51	:48	11:57	:24	:04	:40	:59	:12	:13	:30	:34	:04	:52	:20	:28	:47	:34	:47	:13	:04	:51	:22	:37	:15	:31	:10	:39	:53	:47	:54	:45	:17	:32	17
18	:13	:19	:06	:52	:47	:55	:25	:02	:37	8:00	:11	:11	:31	:33	:02	:53	:20	:27	:47	:34	:47	:12	:06	:54	:20	:38	:18	:30	:11	:41	:52	:48	:56	:46	:18	:32	18
19	:15	:19	:04	:54	:46	:52	:27	:01	:34	:01	:09	:08	:32	:32	:00	:53	:20	:27	:46	:36	:50	:10	:07	:57	:19	:39	:20	:28	:12	:44	:52	:48	:56	:46	:19	:33	19
20	:16	:18	:02	:55	:44	:49	:28	4:59	:31	:02	:08	:06	:33	:31	7:58	:54	:20	:26	:45	:36	:51	:09	:08	:59	:17	:39	:22	:27	:12	:45	:51	:50	:59	:47	:20	:33	20
21	:17	:17	:00	:56	:42	:46	:29	:57	:28	:03	:05	:02	:34	:29	:55	:54	:20	:26	:45	:37	:52	:07	:08	9:01	:15	:40	:25	:25	:13	:48	:50	:51	13:01	:47	:20	:33	21
22	:18	:16	12:58	:57	:41	:44	:30	:55	:25	:04	:03	8:59	:35	:28	:53	:54	:20	:26	:44	:39	:55	:06	:09	:03	:13	:41	:28	:24	:15	:51	:50	:53	:03	:48	:21	:33	22
23	:19	:16	:57	:59	:39	:40	:31	:53	:22	:05	:02	:57	:36	:28	:52	:54	:20	:26	:43	:40	:57	:04	:10	:06	:12	:42	:30	:22	:16	:54	:49	:55	:06	:48	:21	:33	23
24	:20	:15	:55	6:00	:39	:39	:32	:51	:19	:06	:01	:55	:37	:27	:50	:54	:22	:28	:42	:41	:59	:03	:11	:08	:10	:44	:34	:21	:18	:57	:48	:56	:08	:49	:21	:32	24
25	:22	:15	:53	:01	:37	:36	:33	:50	:17	:07	:00	:53	:37	:27	:50	:54	:22	:28	:41	:42	8:01	:01	:13	:12	:08	:45	:37	:19	:19	12:00	:48	:57	:09	:49	:21	:32	25
26	:23	:14	:51	:02	:36	:34	:34	:49	:15	:08	4:59	:51	:38	:27	:49	:54	:22	:28	:40	:43	:02	7:59	:14	:15	:07	:46	:39	:18	:20	:02	:47	:58	:11	:50	:22	:32	26
27	:24	:12	:48	:03	:34	:31	:35	:47	:12	:09	:58	:49	:39	:26	:47	:54	:22	:28	:39	:43	:04	:58	:15	:17	:05	:47	:42	5:17	5:22	:05	:47	6:00	:13	:51	:22	:31	27
28	:25	:12	:47	:04	:32	:28	:36	:45	:09	:10	:56	:46	:40	:25	:45	:54	:22	:28	:38	:44	:06	:56	:16	:20	:03	:49	:46	5:15	:23	:08	:46	:01	:15	:52	:23	:31	28
29	:2	:12	:45	.....	.....	.....	:38	:44	:06	:12	:55	:43	:41	:25	:44	:54	:22	:28	:37	:45	:08	:55	:17	:22	:01	:50	:49	:14	:24	:10	:46	:01	:15	:52	:23	:31	29
30	:28	:11	:43	.....	.....	.....	:39	:42	:03	:13	:53	:40	:42	:24	:42	:54	:23	:29	:36	:46	:10	:53	:18	:25	6:59	:50	:51	:13	:24	:11	:45	:02	:17	:53	:23	:30	30
31	:29	:09	:40	.....	.....	.....	7:40	5:40	:00	.....	.....	.....	:42	:22	:40	.....	.....	.....	:35	:47	:12	:51	:18	:27	.....	.....	.....	:11	:25	:14	.....	.....	.....	:54	:23	:29	31
Total	407-05			337-32			331-51			278-51			251-26			224-59			241-33			273-40			305-08			358-54			384-42			417-57			
Av.	13-08			12-03			10-42			9-18			8-07			7-30			7-48			8-50			10-10			11-35			12-49			13-29			

Total Time for Year 3813:38. Average Time per Night 10:32.

W.

MBER		OCTOBER			NOVEMBER			DECEMBER			
ff	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
:04	8:59	7:13	5:36	10:23	5:25	5:12	11:47	5:00	5:48	12:48	1
:05	9:02	:11	:37	:26	:24	:13	:49	5:00	:49	:49	2
:06	:05	:09	:38	:29	:23	:15	:52	5:00	:50	:50	3
:09	:09	:08	:40	:32	:21	:16	:55	4:59	:52	:53	4
:10	:12	:06	:41	:35	:20	:18	:58	:59	:53	:54	5
:11	:15	:04	:42	:38	:19	:19	12:00	:59	:54	:55	6
:12	:17	:03	:43	:40	:18	:20	:02	:59	:55	:56	7
:13	:20	:01	:44	:43	:17	:21	:04	:59	:56	:57	8
:14	:23	6:59	:45	:46	:16	:22	:06	:59	:56	:57	9
:14	:25	:58	:45	:47	:15	:23	:08	:59	:56	:57	10
:15	:27	:56	:46	:50	:14	:24	:10	:59	:58	:59	11
:16	:30	:55	:48	:53	:13	:25	:12	:59	:58	:59	12
:17	:33	:53	:49	:56	:12	:28	:16	:59	6:00	13:01	13
:18	:35	:51	:51	11:00	:11	:29	:18	5:00	:01	:01	14
:19	:38	:50	:52	:02	:10	:30	:20	5:00	:02	:02	15
:21	:42	:48	:53	:05	:09	:31	:22	5:00	:02	:02	16
:22	:45	:46	:55	:09	:08	:32	:24	5:00	:02	:02	17
:23	:48	:45	:56	:11	:07	:33	:26	:01	:03	:02	18
:24	:50	:43	:57	:14	:07	:33	:26	:01	:04	:03	19
:24	:52	:42	:57	:15	:06	:35	:29	:02	:05	:03	20
:25	:55	:40	:58	:18	:05	:36	:31	:02	:05	:03	21
:26	:58	:39	6:00	:21	:05	:38	:33	:03	:06	:03	22
:27	10:00	:37	:01	:24	:04	:40	:36	:03	:06	:03	23
:29	:04	:36	:03	:27	:03	:41	:38	:04	:06	:02	24
:30	:07	:34	:04	:30	:03	:42	:39	:04	:06	:02	25
:31	:09	:33	:05	:32	:02	:43	:41	:05	:07	:02	26
:32	:12	5:32	5:07	:35	:02	:45	:43	:06	:07	:01	27
:34	:16	5:30	:08	:38	:01	:46	:45	:07	:08	:01	28
:35	:19	:29	:09	:40	:01	:46	:45	:07	:08	:01	29
:35	:21	:28	:09	:41	:00	:47	:47	:08	:08	13:00	30
		:26	:10	:44				:09	:08	12:59	31
:08		343–24			369–42			402–27			
:40		11–05			12–19			12–59			

May 22, 621-C 1919

CITY OF CHICAGO

MUNICIPAL ELECTRIC STREET LIGHTING

SCHEDULE

ZONE—3

Drawing No. 8040-G

Jan. 15, 1918

Revised for 1918. 3-26-18. G. F. W.

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			
Day	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	On	Off	Time	Day
1	5:10	6:09	12:59	5:46	5:53	12.07	6:21	5:16	10:55	7:56	5:22	9:26	8:29	4:36	8:07	8:58	4:07	7:09	9:09	4:08	6:59	8:49	4:34	7:45	8:05	5:01	8:59	7:13	5:36	10:23	5:25	5:12	11:47	5:00	5:48	12:48	1
2	:11	:09	:58	:47	:52	:05	:22	:13	:51	:57	:21	:24	:30	:35	:05	:59	:07	:08	:08	:10	7:02	:48	:34	:46	:03	:05	9:02	:11	:37	:26	:24	:13	:49	5:00	:49	:49	2
3	:12	:09	:57	:48	:50	:02	:23	:11	:48	:58	:19	:21	:31	:33	:02	9:00	:07	:07	:08	:10	:02	:47	:35	:48	:01	:06	:05	:09	:38	:29	:23	:15	:52	5:00	:50	:50	3
4	:13	:09	:56	:50	:50	12:00	:24	:10	:46	:59	:17	:18	:32	:32	8:00	:01	:07	:06	:08	:11	:03	:45	:36	:51	8:00	:09	:09	:08	:40	:32	:21	:16	:55	4:59	:52	:53	4
5	:13	:09	:55	:51	:49	11:58	:25	:08	:43	8:00	:16	:16	:33	:32	7:59	:01	:06	:05	:08	:11	:03	:44	:38	:54	7:58	:10	:12	:06	:41	:35	:20	:18	:58	:59	:53	:54	5
6	:14	:08	:54	:52	:48	:56	:27	:07	:40	:01	:14	:13	:34	:30	:56	:02	:06	:04	:08	:12	:04	:43	:39	:56	:56	:11	:15	:04	:42	:38	:19	:19	12:00	:59	:54	:55	6
7	:15	:08	:53	:53	:47	:54	:28	:06	:38	:03	:13	:10	:35	:29	:54	:02	:05	:03	:08	:13	:05	:42	:40	:58	:55	:12	:17	:03	:43	:40	:18	:20	:02	:59	:55	:56	7
8	:16	:08	:52	:55	:46	:51	:29	:04	:35	:04	:12	:08	:36	:28	:52	:03	:05	:02	:07	:13	:06	:40	:41	8:01	:53	:13	:20	:01	:44	:43	:17	:21	:04	:59	:56	:57	8
9	:17	:07	:50	:56	:44	:48	:30	:03	:33	:05	:10	:05	:37	:27	:50	:04	:04	7:00	:07	:13	:06	:39	:42	:03	:51	:14	:23	6:59	:45	:46	:16	:22	:06	:59	:56	:57	9
10	:18	:07	:49	:57	:42	:45	:31	:01	:30	:06	:08	:02	:38	:26	:48	:04	:04	7:00	:06	:13	:07	:38	:43	:05	:49	:14	:25	:58	:45	:47	:15	:23	:08	:59	:56	:57	10
11	:19	:07	:48	:59	:40	:41	:33	4:59	:26	:07	:06	8:59	:39	:24	:45	:05	:04	6:59	:06	:14	:08	:36	:43	:07	:48	:15	:27	:56	:46	:50	:14	:24	:10	:59	:58	:59	11
12	:21	:06	:45	6:00	:39	:39	:34	:57	:23	:08	:04	:56	:50	:23	:43	:05	:04	:59	:05	:16	:11	:35	:44	:09	:46	:16	:30	:55	:48	:53	:13	:25	:12	:59	:58	:59	12
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14	:23	:06	:42	:03	:38	:35	:36	:53	:17	:10	:01	:51	:42	:21	:39	:06	:05	:59	:04	:17	:13	:32	:46	:14	:13	:18	:35	:51	:51	11:00	:11	:29	:18	5:00	:01	:01	14
15	:24	:06	:42	:04	:37	:33	:37	:52	:15	:11	:00	:49	:43	:21	:38	:07	:05	:58	:04	:18	:14	:31	:47	:16	:41	:19	:38	:50	:52	:02	:10	:30	:20	5:00	:02	:02	15
16	:25	:06	:41	:05	:35	:30	:38	:51	:13	:13	4:59	:46	:44	:20	:36	:07	:05	:58	:03	:19	:16	:30	:49	:19	:39	:21	:42	:48	:53	:05	:09	:31	:22	5:00	:02	:02	16
17	:26	:05	:39	:06	:33	:27	:39	:49	:10	:14	:57	:43	:45	:19	:34	:07	:05	:58	:02	:19	:17	:28	:49	:21	:37	:22	:45	:46	:55	:09	:08	:32	:24	5:00	:02	:02	17
18	:28	:04	:36	:07	:32	:25	:40	:47	:07	:15	:56	:41	:46	:18	:32	:08	:05	:57	:02	:19	:17	:27	:51	:24	:35	:23	:48	:45	:56	:11	:07	:33	:26	:01	:03	:02	18
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20	:31	:03	:32	:10	:29	:19	:43	:44	:01	:17	:53	:36	:48	:16	:28	:09	:05	:56	9:00	:21	:21	:24	:53	:29	:32	:24	:52	:42	:57	:15	:06	:35	:29	:02	:05	:03	20
21	:32	:02	:30	:11	:27	:16	:44	:42	9:58	:18	:50	:32	:49	:14	:25	:09	:05	:56	9:00	:22	:22	:22	:53	:31	:30	:25	:55	:40	:58	:18	:05	:36	:31	:02	:05	:03	21
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25	:37	6:00	:23	:16	:22	:06	:48	:35	:47	:22	:45	:23	:52	:12	:20	:09	:07	:58	:56	:27	:31	:16	:58	:42	:23	:30	:07	:34	:04	:30	:03	:42	:39	:04	:06	:02	25
26	:38	5:59	:21	:17	:21	:04	:49	:34	:45	:23	:44	:21	:53	:12	:19	:09	:07	:58	:55	:28	:33	:14	:59	:45	:22	:31	:09	:33	:05	:32	:02	:43	:41	:05	:07	:02	26
27	:39	:57	:18	:18	:19	:01	:50	:32	:42	:24	:43	:19	:54	:11	:17	:09	:07	:58	:54	:28	:34	:13	5:03	:47	:20	:32	:12	5:32	5:07	:35	:02	:45	:43	:06	:07	:01	27
28	:40	:57	:17	:19	:17	10:58	:51	:30	:39	:25	:41	:16	:55	:10	:15	:09	:07	:58	:53	:29	:36	:11	:01	:50	:18	:31	:16	5:30	:08	:38	:01	:46	:45	:07	:08	:01	28
29	:42	:57	:15				:53	:29	:36	:27	:40	:13	:56	:10	:14	:09	:07	:58	:52	:30	:38	:10	:02	:52	:16	:35	:19	:29	:09	:40	:01	:46	:45	:07	:08	:01	29
30	:43	:55	:13				:54	:27	:33	:28	:38	:10	:57	:09	:12	:09	:08	:59	:51	:31	:40	:08	:03	:55	:14	:35	:21	:28	:09	:41	:00	:47	:47	:08	:08	15:00	30
31	:44	:54	:10				7:55	5:25	:30	.....	.....	.....	:57	:07	:10				:50	:32	:42	:06	:03	:57				:26	:10	:44				:09	:08	12:59	31
Total	391–35			323–32			316–21			263–51			235–56			209–59			226–03			258–10			290–48			343–24			360–42			402–27			
Av	12–38			11–43			10–12			8–48			7–37			7–00			7–18			8–20			9–40			11–05			12–19			12–59			

Total Time for Year 3631:14. Average Time per Night 9:57.

the matter aforesaid then such dispute or controversy shall not be permitted to delay or interfere with the progress of any work provided or permitted by this agreement to be done by either party hereto.

46. It is expressly understood and agreed by and between the parties hereto, that all agreements on the part of said City hereinabove referred to with reference to the assumption of any obligation to make any payment or payments of money to said District herein, or any obligation on the part of said District to furnish the electrical energy herein specified, or to do any work or to incur any expense hereunder are upon the condition that the City Council of said City shall in each fiscal year during the period covered by this agreement appropriate funds therefor and if necessary levy taxes for such purpose.

IN WITNESS WHEREOF, On the day and year first written the parties hereto have caused these presents to be executed in triplicate.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Committee on Finance.
Attest:
JOHN MCGILLEN, (Seal)
Clerk.

CITY OF CHICAGO.
By WILLIAM G. KEITH,
Commissioner of Gas and Electricity.
Approved:
WM. HALE THOMPSON, (Seal)
Mayor.
Approved as to Engineering:
G. S. BRACK,
Electrical Engineer.
Approved as to Form:
CHAS. E. ANTHONY,
Asst. Attorney.
C. ARCH WILLIAMS,
Attorney.
Countersigned:
L. H. GOSSELIN,
Comptroller.
Approved as to Form:
FRANK S. RIGHEIMER,
Acting Corporation Counsel.

EXHIBIT A.

City of Chicago Equipment Located in Thirty-ninth St. Pumping Station.

High tension bus bars, disconnect switches and oil switches for receiving energy from two incoming feeders and delivering same to two transformer banks together with brick compartments or cells containing said equipment. This equipment in detail consists of:

Four (4) General Electric, Type F, Form K12. 300 amp., 15,000 volts, 3 pole, single throw, electrically operated, full automatic, transformer trip, oil switches.

Twenty-four (24) 300 amp., 15,000 volt disconnecting switches.

Eight (8) General Electric Form K-28, 80/5 amp., 15,000 volt current transformers.

Four (4) General Electric, 200 watt, 13,200/110 volt potential transformers.

Two (2) Pittsburgh 5 K. W. 13,200/110-220 volt transformers and fuses.

All copper tubing, cable, insulators and supports used in making connections to and between the above equipment except cable constituting part of 12,000 volt line No. 301.

All brick compartments or cells enclosing or protecting above equipment, together with all relays and other equipment mounted within or upon such compartments or cells and used in connection with the operation or control of the above equipment.

One (1) marble switchboard panel for containing switches for controlling the above oil switches, together with all equipment mounted thereon or attached thereto.

Six (6) 250 K. W. Step-down transformers—Primary voltages, 12,000-11,500-11,000-10,500, Secondary voltages, 4250-4650-5050.

Two (2) marble switchboard panels with all equipment mounted thereon or attached thereto used in controlling or measuring the energy delivered from the secondaries of the above transformers.

Real Estate Development.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Real Estate Development reports that

on January 25, 1917 (page 105 of the Proceedings), the Board granted the City of Chicago the right to use a part of the east and west banks of the right of way of the North Shore Channel adjacent to and north of Lawrence avenue as an approach to a temporary bridge for public traffic, and to cross said North Shore Channel at said point with said temporary bridge, the term of said grant to begin September 1, 1916, and to end March 1, 1918, with the privilege of extension for one year.

Your Committee further reports that it is advised that said grant was extended to March 1, 1919, and the City of Chicago has requested that said grant be extended for a period of three months ending May 31, 1919, with the privilege of a further extension of not to exceed two months.

Your Committee further reports that said city has also requested the Sanitary District to consent to a sublease by the Illinois Stone Company for said period of three months with the privilege of renewal for not to exceed two months thereafter, of part of the west bank of said right of way of said channel, which was on March 20, 1913, leased to said company by the Sanitary District for a period of ten years from April 1, 1913, which property is to be used for the west approach of said temporary bridge.

Your Committee herewith presents to the Board an agreement between the Sanitary District and the Illinois Stone Company covering the subject matter above specified and also a consent to the said lease from the Illinois Stone Company to the City of Chicago above referred to, which agreement and consent have been approved by the Attorney, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in triplicate the form of said agreement and the consent to the lease above specified.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
MATT A. MUELLER,
WALLACE G. CLARK,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, May 22, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 budget.

Engineering Department.

Roger T. Hall, sub-instrument man, $130 per month.

Wm. F. Tuttle, sub-instrument man, $130 per month.

Arthur Jones, painter, 87½ cents per hour.

Charles Loetz, sub-foreman, $5 per day.

Fred Green, rough carpenter, 55 cents per hour.

Hugh Jones, rough carpenter helper, 50 cents per hour.

Henry Smith, laborer, 45 cents per hour.

John Galvin, laborer, 45 cents per hour.

Jos. Mooney, laborer, 45 cents per hour.

Michael Doyle, laborer, 45 cents per hour

Wm. Wellahan, laborer, 45 cents per hour.

Riggori Constantine, laborer, 45 cents per hour.

Electrical Department.

Thos. Brannigan, operator (vacation period), $125 per month.

A. P. Conlan, lineman (temporary), $165 per month.

REINSTATEMENTS.

Due to Honorable Discharge from the U. S. Army and Navy Service.

Engineering Department.

John A. Whalen, rodman, $115 per month.

Electrical Department.

John H. Carney, operator, $155 per month.

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
WALLACE G. CLARK,
H. E. LITTLER,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Passed and not voting—Mr. Sergel—One.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from H. M. Montgomery, Commissioner of Public Works of the City of Evanston, calling attention to the condition of the Brown avenue bridge in Evanston crossing the North Shore Channel and suggesting repairs thereon.

Referred to the Committee on Engineering.

The Clerk presented a communication from Harry Lewis, 3253 West Madison street, making claim for $12.40 alleged to be due him for services rendered while an employe of the Sanitary District.

Referred to the Committee on Finance.

The Clerk presented a communication from Frank Sloan, Assessor, Lockport, Ill., enclosing blank schedules for the listing of personal property of the Sanitary District in the Township of Lockport, and requesting a pass to admit him to the power house at Lockport.

Referred to Mr. Paullin.

MISCELLANEOUS AND NEW BUSINESS.

The Clerk presented his resignation of the office of Clerk of The Sanitary District of Chicago, as follows:

CHICAGO, May 21, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Hereby is respectfully tendered my resignation as Clerk of The Sanitary District of Chicago, effective at your convenience and upon the election of and qualifying by my successor.

May I be permitted to express my gratification at having been associated for the last six and one-half years with the vast and useful undertakings to our community so successfully carried through by your Honorable Body, also my appreciation of the uniform kindly consideration shown me throughout term of service.

Very respectfully,
JOHN MCGILLEN.

Mr. Clark moved that the resignation of Mr. John McGillen, as Clerk of The Sanitary District of Chicago, be accepted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark moved that a committee of two, composed of Messrs. Paullin and Carr, be appointed to prepare suitable resolutions reciting the services of Mr. John McGillen, Clerk, to the public during his incumbency in said office, and when prepared that they be spread upon the minutes of the Proceedings of the Board.

The motion prevailed.

Election of Clerk.

Mr. Lawley moved that Mr. Lawrence F. King be elected Clerk of The Sanitary District of Chicago, and that the letters of recommendation presented and read by the Clerk, testifying to the ability of Mr. King, be printed in the Proceedings.

Temporary Chairman.

President Sergel called Mr. Carr to the Chair and took a seat on the floor.

Mr. Sergel moved as a substitute for Mr. Lawley's motion that Mr. Isaac J. Bryan be elected Clerk of The Sanitary District of Chicago.

On roll call the substitute was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

The question recurring on the motion of Mr. Lawley was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

The following are the letters of recommendation of Mr. Lawrence F. King which were read to the Board:

CIRCUIT COURT OF ILLINOIS.
COOK COUNTY.

CHAMBERS OF JUDGE ANTON T. ZEMAN.

Chicago, May 16, 1919.

To the Honorable Trustees of The Sanitary District of Chicago.

Gentlemen—I am informed that you have under consideration the appointment of Mr. Ollie King as Chief Clerk of the Drainage Board.

I have known Mr. King for many years and know him to be a man of honesty, integrity and responsibility, both in private and public life.

His experience and record as an employe of the City of Chicago are such that, in my judgment, he will be eminently qualified to serve the people in the office which you have under consideration for him.

Yours very respectfully,
ANTON T. ZEMAN.

STANDARD TRUST & SAVINGS BANK.
MONROE AND CLARK STREETS.

Chicago, May 15, 1919.

Trustees, Sanitary District of Chicago, Chicago, Ill.

Gentlemen—Learning that Mr. Lawrence F. King is an applicant for the position of clerkship of your Board, I am writing to recommend his appointment.

Mr. King is vouched for and highly recommended by a number of friends and customers whose opinions I appreciate, and I am confident if the appointment is made and he is given an opportunity to demonstrate his ability he will make good in every particular.

Yours very truly,
C. S. CASTLE,
President.

CIRCUIT COURT OF COOK COUNTY.
JUDGE JESSE A. BALDWIN
IN CHAMBERS.

Chicago, May 8, 1919.

Jas. H. Lawley, Esq., Chairman, Finance Committee, Board of Sanitary Trustees, Chicago, Ill.

Dear Mr. Lawley—It has come to my knowledge that the Board is considering the possible appointment to the clerkship of your Board of Lawrence F. King, Esq. Mr. King, or "Larry," as he is familiarly called, was my Minute Clerk for many months, and proved himself to be the most gentlemanly and efficient clerk that I have ever known. He is a hard worker, is attentive to his

business and his integrity is unquestioned.

I do not believe there is a better man for the position in the city of Chicago.

Sincerely yours,
JESSE A. BALDWIN.

FORT DEARBORN NATIONAL BANK OF CHICAGO.

Chicago, May 15, 1919.

The Trustees of The Sanitary District of Chicago.

Gentlemen—We understand there has been submitted to you one Lawrence F. King, who is now in charge of the Waste Disposal Plant of the City of Chicago.

We know that Mr. King has held this position successfully for the past four years and feel that he is well qualified to hold the position of Clerk of the Sanitary District, to which he asks appointment.

We take great pleasure in recommending him upon his honesty, reliability and integrity.

Very respectfully,
W. W. LEGROS,
Cashier.

CIRCUIT COURT OF COOK COUNTY.
JUDGE ROBERT E. CROWE
IN CHAMBERS.

Chicago, May 15, 1919.

Hon. James H. Lawley, Sanitary District Trustee, Karpen Building, Chicago, Ill.

My Dear Mr. Lawley—I understand that Lawrence F. King is an applicant for the position of Chief Clerk of the Sanitary District. I have known Mr. King for a number of years. He filled with credit and distinction the position of Deputy Clerk of the Circuit Court, and while occupying that position in our Court Judge Jesse A. Baldwin had so much confidence in his honor and integrity that he selected him custodian of the ballots and records in what was commonly called the Hoyne and Cunnea vote fraud cases. He is a young man of education, character and ability, and I am satisfied will fill the position of Clerk of the Sanitary Board, if he is fortunate enough to be appointed by you gentlemen, with credit to himself and the Board.

Respectfully yours,
ROBERT E. CROWE.

STANDARD OIL COMPANY.
(INDIANA)
910 SOUTH MICHIGAN AVE.

Chicago, May 15, 1919.

Mr. James H. Lawley, Chairman of Finance Committee, Sanitary District, Chicago.

Dear Sir—It has come to my knowledge that the name of Lawrence F. King is pending before your bureau for appointment as Clerk of your bureau.

Our company has transacted a great deal of business with the Bureau Waste Disposal, over which Mr. King has jurisdiction, and our relations have been of a very satisfactory nature.

Yours very truly,
STANDARD OIL COMPANY,
T. J. THOMPSON,
Manager.

THE ATLAS DRYER COMPANY.
CLEVELAND, OHIO.

Cleveland, O., May 13, 1919.

To Whom It May Concern:

Our business relations with Mr. Lawrence F. King, general foreman in charge of the Bureau of Waste Disposal of the City of Chicago, have extended over a period of more than four years. We have found him capable and absolutely trustworthy and regard his word just as good as his bond.

We are satisfied that any business connection he undertakes will be carried out with credit to himself.

Very truly yours,
THE ATLAS DRYER COMPANY.
W. M. CUMMER,
President.

LYNCH-CLARISEY COMPANY.
FUEL OIL.
PEERLESS BRAND OILS AND GREASES.
3211-13 SOUTH WOOD STREET.

Chicago, May 15, 1919.

Mr. James H. Lawley, Chairman, Finance Committee, Sanitary District of Chicago, Chicago, Ill.

Dear Sir—I have been asked to give expression to my knowledge of the ability, character and habits of Mr. Lawrence F. King.

I have known Mr. King since boyhood, and it is with pleasure, indeed, that I am able to state that he is a man of exceptional ability, absolutely sober, an ideal family man, and one whose

word, to the writer at least, is as good as his bond.

I have watched with satisfaction his administration of the affairs of the Municipal Reduction Plant, and have seen him under difficulties where tact, diplomacy and executive ability of the highest order were essential, and Mr. King has measured up to the required standard in every instance.

I feel that Mr. King's capabilities are such that he can handle any position he undertakes to fill with credit to himself as well as all parties concerned.

Yours very truly,
M. J. LYNCH.

STATE OF ILLINOIS.
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS.
SPRINGFIELD.

November 14, 1918.

Mr. L. F. King, Bureau of Waste Disposal, City Hall Square Bldg., Chicago, Ill.

Dear Mr. King—I have your letter with reference to fertilizer for public parks playgrounds, and will advise the purchasing agent concerning the matter. Glad to learn that you have found an outlet for some of the tankage.

Thank you for your kind expression of personal regard, and in return I wish to say that I feel that you have always been a great assistance and very efficient in handling the business.

Sincerely yours,
FRANK I. BENNETT.

Election of Manager of Real Estate Department.

Mr. Clark moved that Mr. Walter C. Davis be elected Manager of the Real Estate Department of The Sanitary District of Chicago.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—Mr. Sergel—One.

Mr. Sergel presented the following ordinance:

AN ORDINANCE

Amending an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on October 28, 1915, "Providing Certain Rules and Regulations and Rules of Order of the Board of Trustees of the Sanitary District of Chicago," as Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago December 23, 1915, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on December 1, 1916, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 4, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 11, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 18, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on April 5, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on May 3, 1917, and as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on July 12, 1917.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That Section 1 of an ordinance passed by the Board of Trustees of the Sanitary District of Chicago on October 28, 1915, as amended, be, and the same is hereby further amended by striking out the word "sharp" in Rule and Regulation No. 2, as printed in line thirty-six of the first column of page 1414 of the Proceedings of October 21, 1915, and inserting in lieu thereof, "unless otherwise ordered at a regular meeting of the Board of Trustees."

SEC. 2. This ordinance shall be in force and effect from and after its passage.

Referred to the Committee on Rules.

Mr. Sergel presented the following ordinance:

AN ORDINANCE

Amending an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on October 28, 1915, "Providing Certain Rules and Regulations and Rules of Order of the Board of Trustees of the Sanitary District of Chicago," as Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on December 23, 1915, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on December 1, 1916, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 4, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 11, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 18, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on April 5, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on May 3, 1917, and as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on July 12, 1917.

Be It Ordained by the Board of Trustees of the Sanitary District of Chicago:

SECTION 1. That Section 1 of an ordinance passed by the Board of Trustees of the Sanitary District of Chicago on October 28, 1915, as amended, be and the same is hereby further amended by striking out the words, "except when it may be deemed necessary to hold executive sessions" in Rule and Regulation No. 1, as printed in lines twenty-seven, twenty-eight and twenty-nine of the first column of page 1414 of the Proceedings of October 21, 1915.

SEC. 2. This ordinance shall be in force and effect from and after its passage.

Referred to the Committee on Rules.

Mr. Nance presented the following order:

WHEREAS, The Trustees of The Sanitary District of Chicago are charged with the duties and responsibilities of administering the affairs of a corporation in which the public has invested upward of $100,000,000 with the main object of safeguarding the health and lives of the citizens of Chicago, and

WHEREAS, It is desirable that the public at all times and to the fullest extent possible be kept advised of the character of the work done by the Trustees, their management of the public fund and the zeal with which they maintain careful watch over the interests of the citizens in their investment, and

WHEREAS, There is considerable misunderstanding and lack of knowledge among citizens as to the exact functions of the Sanitary District and its place and scope in relation to other municipal governments of Cook County, because of which it is wise and expedient that the utmost publicity be given to every act of this Board, therefore be it

Ordered, That the Clerk of the Sanitary District be and he is hereby directed to mail notices of all Board and committee meeting, specifying the place and hour and any special business that may be on the calendar, to the city editors of all the daily newspapers, and the editors of the principal other newspapers, published in the city of Chicago, and the leading civic organizations of the city, such notices to be mailed not less than forty-eight hours previous to such Board or committee meetings.

Mr. Nance moved that the order be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Committee of the Whole.

Mr. Lawley moved that the Board resolve itself into the Committee of the Whole to consider the advisability of accepting bonds of the City of Chicago at face value in payment of the judgments obtained by the Sanitary District against the City of Chicago under the street lighting contract.

The motion prevailed and the Board resolved itself into the Committee of the Whole with Mr. Carr in the Chair.

The Committee of the Whole rose and the Board resumed business.

The Chairman reported that the Committee had considered an offer of the City of Chicago to pay to The Sanitary District of Chicago in bonds the amounts of the judgments obtained against the City of Chicago of about five millions of dollars. A motion was carried authorizing the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District to notify the Comptroller of the City of Chicago that the Sanitary District will accept said bonds at par in payment of said debt.

Mr. Lawley moved that the report of the Committee be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillon,
Clerk.

C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, MAY 29, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present: Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent: None.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meetings of May 8 and 15, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 29, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the advisability of changing the locations of the office of the Marshal of the Sanitary District and of the switchboard.

The Architect states that the necessary work of removing the office of the Marshal can be performed by the Superintendent of the building at an estimated cost of $180.00 and the work of removing the switchboard to a new location can be done by the Chicago Telephone Company at an estimated cost of $180.00.

Your Committee having considered the matter is if the opinion that such changes should be made and therefore recommends the passage of the following order:

Ordered, That the Architect be and he is hereby authorized and directed to make the necessary arrangements with the Superintendent of the building to remove the Marshal's office to a new location provided the cost of the same shall not exceed the sum of $180.00 and to make similar arrangements with the Chicago Telephone Company to remove the switchboard to a new location provided the cost of the same shall not exceed the sum of $180.00.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, May 29, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of May payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

John McGillen, Clerk (expenses of employee)	$ 1.58
Nash Bros. (work on Contract No. 1, Desplaines River Sewer)	41,654.58
Nash-Dowdle Co. (work on Evanston Sewage Pumping Station)	22,069.74
Rogers & Hall (contract proposal bids)	445.00
Jas. O. Heyworth (labor and material)	74.18
Peth & Goeler (repairs to transit)	35.00
McCallum & Clark (rent)	25.00
Engineering & Contracting (advertising)	21.38
Orrin Eames (rent)	20.00
Rogers & Hall Co. (errata sheets)	12.50
Amount carried forward	$ 64,358.96

Amount brought forward	$ 64,358.96	
Adam Schillo Lumber Co. (lumber)	11.39	
Schreiber Bros. (supplies)	8.22	
A. H. Brindley, R. N. (professional services)	5.00	
Public Service Co. of Northern Illinois (gas service)	1.05	
A. Guthrie & Co. (labor and material Sec. 13, Calumet-Sag Channel)	249.67	
		$ 64,634.29
Maintenance and Operation Account.		
John McGillen, Clerk (gas service, 39th St. Pumping Station)	$ 11.73	
Howard A. Young (valves and seats, 39th St. Pumping Station)	164.40	
The Kellogg-Mackay Co. (black pipe, 39th St. Pumping Station)	51.52	
Paragon Metal Products Co. (brass castings, 39th St. Pumping Station)	43.96	
Interstate Brass Co. (brass pl., 39th St. Pumping Station)	19.90	
The Fair (floor broom, etc., 39th St. Pumping Station)	15.75	
Illinois Central R. R. Co. (rental for coal storage, 39th St. Pumping Station)	10.00	
Crane Co. (wheel, 39th St. Pumping Station)	5.75	
Fuller-Morrison Co. (supplies, 39th St. Pumping Station)	5.29	
Geo. B. Carpenter & Co. (repairs, 39th St. Pumping Station)	2.73	
John McGillen, Clerk (freight charges, C. & E. I. fuel, Lawrence Ave. Pumping Station)	1.00	
Ridgway Dynamo & Engine Co. (repairs, Lawrence Ave. Pumping Station)	73.90	
Sullivan Oil Co. (cylinder oil, Lawrence Ave. Pumping Station)	66.86	
Stebbins Hardware Co. (roofing supplies, Lawrence Ave. Pumping Station)	25.95	
Chicago Fire Brick Co. (fire clay, Lawrence Ave. Pumping Station)	6.00	
United Asbestos & Packing Co. (asbestos gaskets, Lawrence Ave. Pumping Station)	5.94	
L. Gould & Co. (toilet paper, Lawrence Ave. Pumping Station)	4.25	
Stebbins Hardware Co. (steel oilers, Lawrence Ave. Pumping Station)	2.00	
Stebbins Hardware Co. (turn buckles, Lawrence Ave. Pumping Station)	1.80	
Stebbins Hardware Co. (wire brushes, Lawrence Ave. Pumping Station)	1.00	
John McGillen, Clerk (water service)	1.88	
Abe Burrell & Co. (labor, repairing scows No. 1 and No. 2)	241.60	
S. M. Junge (postage stamps)	200.00	
David G. Murray (teaming)	119.40	
Frank Lustig (teaming service)	116.91	
Burr-Vack Co. (pencils, etc.)	71.53	
Bentley-Murray & Co. (report blanks)	56.00	
Geo. B. Carpenter & Co. (supplies)	50.52	
Ridgway Quest Co. (paint)	33.75	
Heath & Milligan Mfg. Co. (paint)	29.25	
Heath & Milligan Mfg. Co. (paint and asphaltum)	25.02	
Chas. Leonhart (cement bags)	20.40	
Abe Burrell & Co. (labor, repairing scows No. 1 and No. 2)	730.40	
F. A. Koth (repairs)	18.15	
Amounts carried forward	$ 2,214.14	$ 64,634.29

Amounts brought forward	$ 2,214.14	$ 64,634.29
W. & L. E. Gurley (supplies)	14.47	
Geo. B. Carpenter & Co. (manila rope)	11.55	
Barrett Hardware Co. (machine bolts, etc.)	10.85	
Albert J. Helbig (lumber)	10.00	
Albert J. Helbig (repairs to Main Channel bridges)	7.84	
The Fred J. Ringley Co. (letterheads)	7.50	
Harry Brown (cement bags)	7.35	
Mears Slayton Lumber Co. (lumber)	5.07	
Stebbins Hardware Co. (vulcan C. clamp)	4.85	
Wm. Heggie (repairing grease cups, etc.)	4.00	
Walden W. Shaw Livery Co. (auto service)	3.20	
Chas. E. Graves & Co. (repairs)	2.50	
Parkers Towel Supply Co. (towel service)	1.60	
Geo. B. Carpenter & Co. (bolts)	.93	
Manning Bros. Garage (oil cans)	.75	
John McGillen, Clerk (special roll, Lawrence Ave. Pumping Station)	157.00	
		2,484.00
Illinois and Michigan Canal and Illinois River Conditions Department.		
Crown Garage (repairs and taxi service)	$ 52.70	
Hotel Atlantic (room and restaurant Heilbron & Dugan)	48.40	
H. & E. F. Hunter (lumber)	26.68	
Chillicothe Hardware Co. (stove polish, etc.)	25.97	
Geo. C. Gleason (glass, etc.)	8.13	
Chillicothe Auto Co. (charging battery)	1.00	
		162.88
Clerical Department.		
John McGillen, Clerk (expenses of employee)	$ 8.08	
		8.08
Police Department.		
Chicago Telephone Co. (telephone service)	$ 3.45	
		3.45
Electrical Department.		
John McGillen, Clerk (expenses of employees)	$ 6.18	
Electric Service Supplies Co. (locke insulators)	440.00	
Commonwealth Edison Co. (fuse plugs, etc.)	286.51	
Delta Star Electric Co. (2 Unit Type RPC, adjustable top and bottom bus bar supports for pipe mounting and to lamp conductor)	275.22	
National Lead Co. (lead sleeving)	240.22	
Flavin Marble Mill (marble)	236.50	
Jeffery Dewitt Insulator Co. (J. D. units)	234.80	
Rex Rubber Tire Co. (tires)	222.98	
H. Channon Co. (reamers, etc.)	219.70	
Standard Underground Cable Co. (copper connectors, etc.)	215.12	
Green Engineering Co. (ledge plate flanges)	209.64	
Interstate Brass Co. (copper pipe, etc.)	117.28	
The Faultless Anchor Co. (guy anchors)	105.10	
Union Petroleum Co. (gasoline)	98.78	
Western Electric Co. (conduit)	82.17	
Hollow Center Packing Sales Co. (special water proof packing)	69.06	
Frazer Lubricator Co. (grease, etc.)	65.78	
Monarch Electric & Wire Co. (guy clamps galv.)	56.45	
Monarch Electric & Wire Co. (galv. cable pins, etc.)	43.59	
The Garden City Sand Co. (gravel and cement)	41.80	
The National Lead Co. (wall lead sleeving)	41.17	
Amounts carried forward	$ 3,303.05	$ 67,292.70

Amounts brought forward	$ 3,303.05	$ 67,292.70
The Kellogg-Mackay Co. (galv. mall. tees, etc.)	37.38	
National Lead Co. (wall lead sleeving)	33.41	
Geo. B. Carpenter & Co. (wood hand screws, etc.)	30.89	
Wilbur J. Connell (spiral pumps)	26.73	
National Lead Co. (wire solder)	24.92	
The Bristol Co. (strip charts)	24.01	
City Collector, City of Chicago (inspection charges)	22.00	
Henry Stuckart (hinge hasps, etc.)	19.66	
Western Electric Co. (condulets bodies, etc.)	19.41	
Stebbins Hardware Co. (rajah lawn mower)	17.70	
The Pulverized Manure Co. (pulverized manure)	17.00	
United States Rubber Co. (short boots)	15.11	
J. W. Landis Mill Co. (moulding, etc.)	15.00	
Geo. B. Carpenter & Co. (best spun oakum, etc.)	12.62	
Jordan Bros. (roughing wheels, etc.)	12.28	
Commonwealth Edison Co. (unilets)	12.23	
Henry Newgard & Co. (black electric slate)	12.00	
Albert Hancock & Co. (association bond)	11.40	
Vesta Accumulator Co. (searchlights)	9.60	
Frederick C. Hanmore, M. D. (professional services)	9.00	
Monarch Electric & Wire Co. (switchboard bolts, comp.)	8.57	
Western Electric Co. (condulet covers, etc.)	7.16	
Commonwealth Edison Co. (minerallac straps)	7.03	
The Lord & Bushnell Co. (lumber)	6.66	
Stewart Warner Speedometer Co. (swivel joint, etc.)	6.07	
Central Electric Co. (batteries)	4.94	
Wm. Zoeller Co. (special studs with hex nuts)	4.50	
Monarch Electric & Wire Co. (unilets)	4.20	
Henry Stuckart (yale night latch)	2.50	
Becker Bros. (brush holder)	2.00	
Redmanol Chemical Products Co. (varnish)	2.00	
United States Crushed Stone Co. (telephone toll calls)	1.00	
John McGillen, Clerk (semi-monthly payroll)	17,331.86	
		21,078.34

General Payroll, Last Half of May, 1919.

John McGillen, Clerk (general payroll)	$ 28,132.12	
		28,132.12

Miscellaneous Accounts.

John McGillen, Clerk (special roll, 39th St. Pumping Station)	$ 288.00	
		288.00

Law Department.

The Berkshire Co. (desk blotters)	$ 27.20	
		27.20
Grand Total		$116,819.35

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 29, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the two 280 H. P. four-pass Edgemoor boilers at the Lawrence avenue pumping station are not equipped with soot blowers and at the present time the boiler tubes are cleaned once daily by a steam lance, which is a dangerous and inefficient method of doing said work, and he recommends that mechanical soot blowers be installed by which the boiler tubes can be cleaned by the firemen thoroughly three or four times a day, which will result in a large yearly saving of coal and a reduction in the cost of labor.

He further states that the experience of the Engineering Department has shown that the best soot blower on the market is that of the Diamond Power Specialty Company called the "Diamond Soot Blower," which can be purchased for the sum of $456.20, and he requests authority to purchase two of said soot blowers and install the same at an additional estimated cost of $420.00 for each installation.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to purchase the two Diamond soot blowers above specified and install the same in the Lawrence avenue pumping station provided the cost of the said blowers and the installation of the same shall not exceed the sum of $1,753.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
PATRICK J. CARR,
H. E. LITTLER,
MATT A. MUELLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 29, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that in accordance with the terms of a contract dated September 24, 1914 (page 1629 of the Proceedings), between James O. Heyworth and the Sanitary District, for the excavation and collateral work on contract section one of the Calumet-Sag Channel of The Sanitary District of Chicago, the Sanitary District has retained from time to time, as a reserve percentage, 12½ per cent of the amount due said contractor, up to and including April 30, 1919, which less a payment therefrom of $40,000 made August 2, 1917, equals the sum of $61,019.20, which sum under the terms of said contract cannot be

paid said Contractor until 30 days after the completion of the work under said contract, and said Contractor has requested that he be paid one-half of said sum.

Your Committee further reports that it is advised by the Chief Engineer that the water connection between the Calumet-Sag Channel and the Main Channel has been made and there only remains to be done about $40,000.00 of work for which the Contractor will be paid and about $10,000.00 worth of work for which he will receive no compensation and in addition the Contractor has a plant on the work valued at $100,000 and the Chief Engineer states it as his belief that the interests of the Sanitary District will be sufficiently safeguarded if the contractor is paid the sum of $25,000.00 from said reserve.

Your Committee having considered the matter, therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby authorized and directed to pay upon the voucher of the Chief Engineer to James O. Heyworth the sum of $25,000.00 out of the reserve percentage retained on said contract, provided said James O. Heyworth obtains the consent in writing of the surety on his bond to the payment of said sum and that all the other terms and conditions of said contract shall remain in full force and effect.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—

Nays—Messrs. Sergel and Nance—Two.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, May 29, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting of May 15, 1919 (page 535A of the Proceedings), bids for the construction of the sprinkling filter and appurtenances in the Village of Morton Grove, having considered all the proposals presented and the qualifications of each bidder, together with the report submited by the Chief Engineer, is of the opinion that all bids for doing said work should be rejected for the reason that the same are excessive.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That all bids received for the construction of the sprinkling filter and appurtenances in the Village of Morton Grove be and the same are hereby rejected for the reason stated, and it is further

Ordered, That the Clerk be and he is hereby authorized and directed to readvertise for bids for the work above specified, and it is further

Ordered, That the checks of the respective bidders for said work be returned to said bidders.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, May 29, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Engineering Department.

Chas. Matjesk, carpenter helper, 50 cents per hour.

John McGee, laborer, 45 cents per hour.

Chas. Pusateri, laborer, 45 cents per hour.

E. Cody, laborer, 45 cents per hour.

A. Rodighiero, laborer, 45 cents per hour.

Carmello Falzone, laborer, 45 cents per hour.

Frank Frelichowski, laborer, 45 cents per hour.

Frank Stradata, laborer, 45 cents per hour.

Nunzio Corigliore, laborer, 45 cents per hour.

Electrical Department.

Charles Dietz, operator (vacation period), $125.00 per month.

REINSTATEMENT.

Due to Honorable Discharge from the U. S. Army Service.

Law Department.

William E. Helander, Asst. Attorney, $250.00 per month.

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.

WALLACE G. CLARK.
MATT. A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Paullin presented the following resolutions with preambles from the Committee on Employment:

CHICAGO, May 29, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment presents the following resolutions with preambles:

WHEREAS, At the present time, and for some years past, a controversy exists, and has existed, between The Sanitary District of Chicago and the United States Government involving the right of the Sanitary District to withdraw from Lake Michigan the amount of water necessary to divert the sewage and drainage of the Sanitary District, and thereby protect the only water supply of the people of Chicago and its environs, involving also the power of the Sanitary District to utilize the vast works installed by it at an expense of many millions of dollars; and

WHEREAS, For a number of years past the Sanitary District has advocated the adoption by the General

Assembly of the State of Illinois of legislation making possible the use of the water power now going to waste and for several years so wasted, and actually created by the operation of the Sanitary District's works for sewage and drainage diversion, and there are now pending before the General Assembly of Illinois certain bills, which, if enacted into law, will authorize and make possible the utilization of this vast water power for the benefit of the people—not only of the Sanitary District, but also of the State generally—and the said bills, in addition, provide for the extension of the deep waterway from the southern terminus of the Sanitary District's canal to the head of navigation at Utica, and ultimately the long dreamed of deep waterway to the Gulf of Mexico; this was expressed as a policy of the State in a joint resolution of the House and Senate of the General Assembly on May 28, 1889—thirty years ago, when the Sanitary District Act was passed and adopted—and the bills now pending in the General Assembly for the utilization of the water power at Brandon's Road near Joliet and at other points along the Des Plaines and Illinois Rivers, and providing for the extension of the waterway constructed by the Sanitary District, have passed the Senate unanimously and are now on third reading in the House of Representatives ready for final passage; and

WHEREAS, The Board of Trustees of the Sanitary District has heretofore fully appreciated the importance of the claim made by the Federal Government in the injunction suits instituted by the United States to enjoin the Sanitary District from withdrawing from Lake Michigan more water than the amount that the Government claims that it should divert, which is less than half of the State law requirement, and the Trustees of the Sanitary District did immediately upon the institution of said suits cause a complete and full defense to be made by the introduction of documentary evidence and the presentation of oral testimony by hydraulic and sanitary engineers of national reputation at an expense of many thousands of dollars to the Sanitary District, all of which was fully justified by virtue of the importance of the litigation to the people of Chicago and its environs; and

WHEREAS, It is well known that the success of the Federal Government in its contention that the withdrawal of water from Lake Michigan should be limited as it contends would not only require an expenditure of many millions of dollars by the people of the Sanitary District in the construction of works to purify sewage, but also would endanger the health and lives of the people of the Sanitary District (Chicago and its environs) by compelling the Sanitary District to substitute untried and impractical methods of disposing of the sewage of the people living within its territorial limits. Furthermore, a large part of the money already expended in the construction of works designed to divert the sewage and drainage from Lake Michigan would be lost to the people; and

WHEREAS, The Board of Trustees of the Sanitary District, believing that all controversies between the United States and the Sanitary District with reference to the withdrawal of water from Lake Michigan and the alleged effect of such withdrawal upon the levels of Lakes Michigan, Huron, Erie and Ontario should be settled, notwithstanding the litigation above mentioned pending in the District Court of the United States for the Northern District of Illinois, on January 5, 1918, passed an ordinance offering to pay to the Federal Govern-

ment an amount of money equal to the cost of constructing works necessary to compensate or offset the alleged lowering of the levels of said lakes; and the said compensation works to be constructed were suggested and recommended by the Engineer's Corps of the United States Army, and consisted of submerged weirs or dams in the St. Clair and Niagara Rivers, which compensation works would contract the flowage capacity of said rivers an amount equal to the withdrawal at Chicago. According to the compromise plan prepared, the Government of the United States was, through Congress, to authorize and empower the Sanitary District to withdraw water as required from Lake Michigan to the maximum amount of twelve thousand cubic feet per second (not "gallons"); and

WHEREAS, The Sanitary District, pursuant to said compromise plan, caused to be introduced in Congress a bill providing for the settlement of the controversy in the manner outlined, and the said bill was referred to the Secretary of War and Chief of Engineers, and the Sanitary District, through its legal and engineering representatives, has been negotiating with the Engineers' Corps of the United States Army in regard to such compromise, and representatives of said Engineers' Corps visited Chicago and inspected the works of the Sanitary District in October, 1918, and, pursuant to further conferences and negotiations, the Chief of Engineers of the United States Army and the Division Engineer at Chicago recently made thorough inspection of the Sanitary District's works; and as a result thereof the Sanitary District is preparing a brief collating the facts and arguments upon which it relies for the favorable action of the Secretary of War and Chief of Engineers. It, furthermore, has employed in this matter the former Attorney of the Sanitary District, who prepared the defense and presented all the evidence, and wrote the briefs, in the two injunction suits hereinbefore mentioned pending in the United States District Court at Chicago, and, who, by reason of six years of continuous application to said matters is thoroughly conversant, not only with the historical data having to do with the controversy but also with the intricate and complicated hydraulic and sanitary engineering and legal problems involved. The Sanitary District has also employed Mr. Francis C. Shenehon to prepare plans for the compensating works above mentioned, as well as for works to offset the alleged lowering of the levels of water of the lower St. Lawrence River at Montreal, due to the Chicago diversion. Mr. Shenehon was for years Head of the Lake Survey, a bureau under the jurisdiction of the War Department, which makes the measurements of the outflow of the various lake outlets and has before it many other important hydraulic questions arising on the Great Lakes system. For a number of years he was Dean of the Engineering Department of the University of Minnesota; and

WHEREAS, The Board of Trustees of the Sanitary District has at all times believed that it had the right and authority to divert from Lake Michigan the amount of water required by State law to the maximum capacity of the Sanitary District's Main Channel, and has been justified in such position by reason of the various recommendations of the International Waterways Commission, reports of Government Engineers and Boards of Engineers and Commissions appointed pursuant to congressional authority and by reason of the necessity of withdrawing such amount of water to protect

the health and preserve the lives of the people of the Sanitary District, thus complying with the Act under which the Sanitary District was organized. The Board of Trustees of the Sanitary District has always appreciated that even though the amount of water required by State law may be withdrawn, nevertheless, in certain localities artificial purification works would be required to supplement the works constructed to divert the sewage, drainage and water from Lake Michigan; that at certain places within the limits of the Sanitary District sufficient water for dilution could not be delivered to properly oxidize and take care of the sewage, thus avoiding local nuisances; and that trade wastes arising in the Stock Yards and along the north branch of the Chicago River and elsewhere should be taken care of in co-operation with the industries responsible for the production of such wastes. With these propositions in view, the Board of Trustees of the Sanitary District has caused to be made extensive experiments covering a period of years to determine the best method of artificially purifying sewage, and has purchased sites for the construction of artificial sewage disposal works, and has actually constructed, and is now constructing, works to purify sewage by artificial means in localities where water from Lake Michigan cannot be delivered to properly oxidize the sewage, thereby avoiding certain nuisances peculiar to such localities; and the Board of Trustees of the Sanitary District has for some time carried on negotiations with representatives of the Stock Yards interests looking to a complete solution of the trade wastes problem of Packingtown, complicated by reason of the many industrial plants located there; and

WHEREAS, The President of the Board of Trustees of the Sanitary District in his inaugural message of December 5, 1916 proposed that the Sanitary District abandon the basic principles upon which the Sanitary District works were constructed, thus throwing into the junk heap a large portion of the sewage diversion works now constructed and in operation, as well as the Sanitary District's hydro-electric plant, which furnishes the people of Chicago with street lighting at very low cost, and that the Sanitary District enter upon a program of constructing and installing works at a cost of upwards of $200,000,000 to take the place of works already installed for diverting sewage, and this proposal was made without any previous engineering investigation or recommendation; and it is the belief of the Board of Trustees of the Sanitary District that such proposal was either made in ignorance of the results which would follow, or recklessly without regard to consequences, and such proposal has very materially embarrassed the Sanitary District in its endeavor to solve the problems confronting it; and

WHEREAS, The solution of the problems hereinbefore mentioned is vital to the interests of the people of Chicago and its environs, as well as to the people of the State of Illinois; and

WHEREAS, The co-operation of every Trustee and official of the Sanitary District is required in order that the people of Chicago may save this immense expense and so that there may be preserved to the people the benefit of the investment already made, and the present practical and efficient works for the protection of the water supply may not be wrecked; and

WHEREAS, The injection of the questions hereinbefore mentioned into petty controversies is liable to seriously affect the solution of these

problems so important to the people; and

WHEREAS, Innuendoes, suggestions and vicious statements made regarding the conduct of the business of the Sanitary District may unjustly bring into disrepute, ridicule and contempt the Sanitary District as a responsible and important municipal enterprise, thus embarrassing it in the prosecution of its works and the carrying out of plans fundamentally important to the people of Chicago and its environs; and

WHEREAS, It has recently come to the attention of the Board of Trustees of the Sanitary District that statements widely circulated have been made by a member, or members, of the Board of Trustees of the Sanitary District by vicious innuendo criticising the management of the affairs of the Sanitary District, charging mismanagement, which statements may seriously endanger and imperil the solution of the important problems of the Sanitary District; and

WHEREAS, These attacks come at a time when bills are on final passage empowering the Sanitary District to acquire and utilize water power at Brandon's Road and elsewhere along the Des Plaines and Illinois Rivers for so many years sought by the Sanitary District, and such attacks and criticism may seriously endanger and imperil the passage of said bills, all of which the party, or parties, making such attacks knew, or should have known, at the time such statements were made:

NOW, THEREFORE, for the purpose of removing any possible criticism of the management of the affairs of the Sanitary District, or any misapprehension that may have arisen with reference to such management, be it

RESOLVED, That the Bureau of Public Efficiency of Chicago, which has heretofore been invited to make an investigation of the management of the affairs and business of the Sanitary District, be, and it is hereby again invited to make a complete and thorough investigation and report upon the management of the affairs and business of the Sanitary District, and that all officers and employees of the Sanitary District, be, and they are hereby instructed to give said Bureau of Public Efficiency of Chicago full and complete opportunity to make said investigation and to give it any and all information that may be requested by it as to the investigation that it may make; and be it further

RESOLVED, That Mr. Gardner S. Williams, of Ann Arbor, Michigan, a Civil Engineer of national reputation, who has heretofore made a report upon the Electrical Department of the Sanitary District and has surveyed and classified the employees of that Department and who is generally familiar with the Sanitary District's works and their operation, be, and he is hereby employed to make a complete survey of the qualifications of the employees and employment of the Engineering and Electrical Department of the Sanitary District, and that J. L. Jacobs & Company, budgetary experts, who, in 1917, installed a budget system for the Sanitary District and who are thoroughly familiar with the financial affairs of the Sanitary District, be, and they are hereby employed to make a classification of the employment and all employees of the Sanitary District; and be it further

RESOLVED, That said Gardner S. Williams and J. L. Jacobs & Company, be, and they are hereby authorized to cooperate with said Bureau of Public Efficiency of Chicago in any investigation which said Bureau may make; and be it further

RESOLVED, That this resolution be printed in the proceedings of the Board of Trustees of the Sanitary

District; that one thousand copies be printed for distribution, and that one copy be sent to the Governor, Lieutenant Governor, Speaker of the House of Representatives and to each member of the General Assembly of the State of Illinois and to the various civic organizations.

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
WALLACE G. CLARK,
H. E. LITTLER,
Committee on Employment.

Mr. Paullin moved that the preambles and resolutions be adopted.

Mr. Nance presented a resolution and moved, if in order, that it be substituted for the preambles and resolutions presented by Mr. Paullin.

The Chairman ruled that the motion was in order.

Mr. Clark appealed from the ruling of the chair.

The roll being called on the question whether the ruling of the chair shall be sustained, was lost by the following vote:

Yeas—Messrs. Sergel and Nance—Two.

Nays—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

TEMPORARY CHAIRMAN.

President Sergel called Mr. Healy to the chair, and took a chair on the floor of the Board room.

President Sergel moved that the motion made by Mr. Paullin be amended so as to read that the resolutions be adopted and not the preambles.

Mr. Lawley moved that the motion to amend be laid upon the table.

On roll call the motion to lay on the table was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

The question recurring upon the motion that the preambles and resolutions be adopted, was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from the Western Quarries Company, which states that its lease of certain land of the Sanitary District at Lemont expires January 31, 1920 and requests a renewal of same for a period of three years.

Referred to the Committee on Real Estate Development.

The Clerk presented a copy of a resolution adopted by the City Planning Committee of the City Club of Chicago, with preambles, resolving that the Chicago river be straightened between Polk and Sixteenth streets; that no bridge be built at Twelfth street which should make this straightening of the river more difficult when ultimately carried out; that no bridge shall be built at Twelfth street which is of unsightly design such as the vertical lift bridge now contemplated; and that copies of said resolution be sent to the members of the City Council, the members of the Sanitary District, the Chicago Plan Commission, the Chicago Railway Terminal Commission and any other civic bodies that are known to be interested.

Referred to the Committee on Engineering.

The Clerk presented a copy of a communication from The Strauss Bascule Bridge Co., referring to the pro-

posed bridge at California avenue, and inviting attention to the fact that a single leaf Strauss Bascule bridge can be furnished for outlying districts for a cost no greater than estimated by the Sanitary District for a swing bridge.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

President Sergel presented the following ordinance, which was referred to the Committee on Rules:

AN ORDINANCE

Amending an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on October 28, 1915, "Providing Certain Rules and Regulations and Rules of Order of the Board of Trustees of the Sanitary District of Chicago," as Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on December 23, 1915, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on December 1, 1916, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 4, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on January 11, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 18, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on April 5, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on May 3, 1917, and as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on July 12, 1917.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That Section 1 of an ordinance passed by the Board of Trustees of The Sanitary District of Chicago on October 28, 1915, as amended, be and the same is hereby further amended by striking out the words and figures "fifty thousand ($50,000.00) dollars" in Rule and Regulation No. 16, as printed in the third and fourth lines of the first column of page 1417 of the Proceedings of 1915, and inserting in lieu thereof the words and figures "two hundred thousand ($200,000.00) dollars."

SEC. 2. This ordinance shall be in full force from and after its passage.

Mr. Nance presented a resolution.

Mr. Nance moved that the resolution be adopted.

Mr. Lawley moved that it be referred to the Committee on Judiciary.

Mr. Clark moved that the motion to refer be amended to read: "referred to the Committee on Judiciary without being published in the Proceedings."

Mr. Lawley accepted the amendment.

On roll call the motion, as amended, was carried by the following vote:

Yeas—Messrs. Carr, Clark Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

Mr. Nance presented an order.

Mr. Nance moved that the order be passed.

Mr. Lawley moved as a substitute that the order be referred to the Committee on Finance without being published in the Proceedings.

On roll call the substitute was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

President Sergel took the chair and

Mr. Healy took his place on the floor of the Board room.

Mr. Nance presented the following orders:

WHEREAS, On May 27, 1919, various units of the Thirty-third Division of the United States Army, composed principally of young men from Chicago and Illinois, who have been fighting the battles of their country on foreign fields in the war between democracy and autocracy, came home and received a welcome from a grateful state and city such as never before has been accorded returning warriors in Illinois, and

WHEREAS, On that day Michigan avenue was profusely decorated with flags which hung from practically every floor in every building between Twelfth street and the river, except from the windows of the Sanitary District, from which a naked flag staff protruded while the District offices remained open, although other public offices were closed in honor of the city's heroic sons, and

WHEREAS, The failure to fly the flag from the District offices and to close the District as marks of welcome to the soldiers have caused adverse comment, therefore be it

Ordered, That the Clerk of the District be and he is hereby directed to purchase a flag of suitable size to be in keeping with the dignity and importance of this public body and to fly the same from a window of the District on all occasions when returning troops are being welcomed to Chicago, and be it further

Ordered, That on the day the major part of the remaining units of the Thirty-third Division come home the offices of the District shall be closed, with the exception of such clerks as may be needed for emergency business of the District.

Mr. Nance moved that the orders be passed.

The Clerk, after permission being given, stated the elements had previously destroyed two new flags displayed from the windows of the Sanitary District on the seventh floor of this office building, and that on the occasions named the District's other flags and bunting formed part of the beautiful display on the lower floors and ground floor entrance of its office building. Also that the District's offices were, generally speaking, closed, and employes allowed part holiday from time parade actually began on those days.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gilbert
Clerk.

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JUL 19 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, JUNE 5, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meeting of May 22, 1919 be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The President presented the following message:

CHICAGO, June 4, 1919.

To the Honorable, the Board of Trustees of The Sanitary District of Chicago.

The Preamble and Resolutions offered by the Employment Committee and adopted at the last meeting of this Board are misleading and indefinite. The preamble contains an untrue statement of the president's position. The opinions expressed in his inaugural were contained in his platform and approved by the people. The Sanitary Board itself has taken as advanced a

stand on the same subject, the question of sewage treatment. Other trustees have been elected on a similar platform. Evidently the cuttle-fish among the trustees emitted this irrelevant matter to obscure the issue. One of the chief points in the preamble has already been shown to be false by the passage by the legislature of the Sanitary District power bill and other waterway bills.

In the words of the resolutions, the Bureau of Public Efficiency "is invited to make a complete and thorough investigation and report upon the management of the affairs and business of the Sanitary District." These terms are too general. Not only should this investigation be made, but the Bureau should be asked to suggest improvements in our present system and to lay out a constructive program in lines of efficiency. It is not enough to examine the acts of department heads and employes. The trustees themselves should be subjected to a searching investigation—not only the present nine trustees, but also all those who have held office in recent years. Some of the points to be looked into are as follows:

The relations of trustees to purchases of land, of coal, and other supplies; the valuations and leases of the District's lands; the violations of the trustees of certain statutes of the state; the relation between the trustees and contractors, and the voting of "extras," the question of specifications apparently made to fit only one bidder; the garbling and falsifications and omissions in the printed proceedings; the action of a trustee who voted on the Sanitary Board for taxes against other citizen's property, and then, taking advantage of his own acts, attacked the tax levies in court to avoid paying his own just taxes.

The evidence in this case, consisting of documents attested to under the seal of the County Clerk, will be submitted to the Bureau of Public Efficiency.

I recommend that all these subjects be referred to the Bureau for investigation and report.

Respectfully,
CHARLES H. SERGEL,
President.

Mr. Nance moved that the message of the President be received and published in the Proceedings.

Mr. Clark moved that the motion be amended to read, that the message of the President be received and published in the Proceedings, and that the subjects referred to by the President in his message be given the right-of-way over all other subjects under the previous order of the Board of Trustees calling upon the Chicago Board of Public Efficiency and others to make a survey and report upon the methods and affairs of the Sanitary District.

Mr. Clark addressed the Board and at the expiration of ten minutes was informed by the Chairman that under the rules of the Board a member could not speak longer than ten minutes at any time without consent of the Board.

Mr. Clark moved that the rules be suspended to permit him to finish his address.

The motion prevailed.

Mr. Nance accepted the amendment to his motion offered by Mr. Clark.

On roll call the motion, as amended, was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and

approved the bond of the Murphy Plumbing Company with the Massachusetts Bonding & Insurance Co. thereon as surety, for the faithful performance of its contract for furnishing, delivering and installing plumbing service piping, gas fittings and conductor pipe work at the Evanston Sewage Pumping Station for The Sanitary District of Chicago and therefore recommends the passage of the following order:

Ordered, That the bond of the Murphy Plumbing Company for the faithful performance of the above specified contract, said bond being in the penal sum of $903.00, be and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract of the Murphy Plumbing Company with the Sanitary District:

THE SANITARY DISTRICT OF CHICAGO,

CONTRACT AND SPECIFICATIONS FOR PLUMBING, SERVICE PIPING, GAS FITTING AND CONDUCTOR PIPE WORK FOR EVANSTON SEWAGE PUMPING STATION.

THIS AGREEMENT, Made and entered into this 22nd day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Murphy Plumbing Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing, delivering and installing the Plumbing, Service Piping, Gas Fitting and Conductor Pipe Work as called for under Subdivision b of the attached specifications, complete, as specified, at the Evanston Sewage Pumping Station of the Sanitary District of Chicago, in the city of Evanston, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the other, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be deter-

mined and on whose inspection all work shall be accepted or condemned, The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of said Contractor, and his estimate and decision shall be final and conclusive and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Subdivision b at the Evanston Sewage Pumping Station.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the plumbing, service piping, gas fitting and conductor pipe work, and all other fittings and appurtenances, including all materials, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each subdivision for all the plumbing, service piping, gas fitting and conductor pipe work are numbered, a1, a2 ect., b1, b2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

General Specifications.

Location of Work.

(1) The Evanston Sewage Pumping Station is now under construction on property owned by the Sanitary District situated on the north-east corner of the junction of Lake street and Elmwood avenue, in the City of Evanston, County of Cook, State of Illinois. The property on which the station is located is immediately adjacent to the main line of the Chicago & Northwestern Railway.

Description.

(2) The work included under this contract and specifications consists in furnishing, delivering and installing at the Evanston Sewage Pumping Station the following: Plumbing, service piping, gas fitting and conductor pipe work.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Provisions for Handling Equipment at Site.

(3) At the Evanston Sewage Pumping Station, the Sanitary District will provide access to the station site, for teams, from Elmwood avenue on the west, and from Lake street on the south. A hand crane will be available for handling the equipment to be installed in the pump room. The Contractor shall operate this, however, at his own expense, and shall properly oil and maintain it during his use thereof.

The Contractor shall, at his own expense, provide any temporary blocking, supports or other protection for the station floor necessary to prevent

injury to the same, and shall make good at his own expense any damages done by him to the station structure or its appurtenances in unloading and installing any of the equipment included under this contract, or in removing plant or other property or in cleaning up.

The Contractor shall furnish such protection as may be necessary against damage in any way to the equipment included under the contract after the same has been installed, and shall be fully responsible for such equipment until its final acceptance.

The Contractor shall also furnish his own storage facilities.

Contract Drawings.

(4) The specifications and plans are intended to cover complete equipment. It is not the intent to give every detail in the plans and specifications. The Sanitary District will not be responsible for the absence of any detail the Contractor may require, or for any special construction which may be found necessary as the work progresses. No additional compensation will be allowed for material or labor used in performing any work hereunder unless the work can be clearly shown to be beyond the intent and scope of the plans and specifications, to the satisfaction of the Chief Engineer.

Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the final layouts included under this contract, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment or layout to make the same conform to the drawings as finally approved.

The Contractor shall also furnish the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment and materials proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Co-operative Service.

(6) The sub-structure and superstructure of the pumping stations will be erected by the contractor under Division A of the Evanston Sewage Pumping Station contracts respectively. As the work progresses, from time to time, material called for under this contract (Division E, subdivision b) will require placing in the concrete, brickwork, or elsewhere, as necessary to properly complete the

structure. The purpose of this contract is to provide for the labor and material required from time to time for this work, as specified herein, and to secure prompt service.

The Contractor under Division E (subdivision b) shall co-operate with the contractor under Division A by promptly placing all piping included under this contract, where it passes through or lies in walls, floors, roofs, or other parts of the building. Promptly upon notice from the Engineer, the Contractor shall furnish and place material as required, and shall securely line up and fasten any piping in concrete forms. He shall also rough in piping to be bedded in walls as required. He shall furnish labor and material, as required from time to time to keep step with the work under Division A.

The Contractor shall further give in advance to the Engineer all information needed as to boxes, chases, holes, gullets, or other openings needed in the work to be placed by the contractor under Division A.

The Contractor shall keep posted on the progress of the work under Division A, and shall be ready at all times upon demand to supply labor and material as required at the proper time without delay.

Under existing contracts, the Sanitary District expects to have the Evanston Sewage Pumping Station building roofed in by October 5, 1919, and the pumping station completed by April 2, 1920. These dates are not guaranteed, however, but are stated as approximate.

Shipment and Installation.

(7) Upon notification, the Contractor shall from time to time deliver the equipment included under this contract upon the station grounds, shall unload the same, providing all necessary labor, power, blocking, hoisting apparatus and other material, shall place the same in a position as called for on the drawings and as directed by the Engineer, shall line up and adjust the various parts one to another, complete all joints and do all other work necessary to completely install and prepare for operation all the equipment included under this contract, and afterwards shall take down and remove from the premises any scaffolding, tackle, blocking or other apparatus which may have been used in the installation, but which is not a part of the equipment included under this contract.

Cutting, Fitting and Patching.

(8) The Contractor under subdivision b of Division E shall, whenever possible, give in advance definite and exact information to the Engineer so that the Engineer can instruct the contractor under Division A (the substructure and superstructure) to leave the required holes, chases or boxes as the work progresses. Should any cutting be required through the neglect of the Contractor under Division E to give the necessary information to the Engineer, sufficiently in advance, the Contractor shall have the work done, at his own expense, by the appropriate trade. Excessive cutting will not be allowed. Only sharp tools suitable for the purpose shall be used. No beams, purlins, joists or other structural features shall be cut without the express permission of the Engineer and then only when and as directed.

All work shall be neatly fitted. Excessive openings will not be permitted.

The Contractor shall have all patching done by the appropriate trade at his own expense.

Tests.

(9) The Contractor shall make all tests required to demonstrate the tightness of his work under the working conditions specified. Where pipes are to be painted, coated or jacketed, after erection, the tests shall be made first. The Contractor shall furnish, at his own expense, all apparatus, water, and appurtenances necessary or proper for all tests, except the gages. All joints shall be examined and all visible leaks stopped.

SPECIFICATIONS.

DIVISION E—SUBDIVISION B.

Description.

(Eb1) The work to be done under this division of the Evanston Sewage Pumping Station contract includes the plumbing, service piping, gas fitting and conductor pipe work as specified hereinafter under the following heads:

I. Sanitary Plumbing.
II. Service Water Piping.
III. Gas Fitting and Water Heater.
IV. Conductor Pipes and Heads and Miscellaneous Drain Piping.

All of the work specified herein shall be executed thoroughly in a first-class manner, strictly in accordance with the ordinances of the City of Evanston. The Contractor shall obtain and pay for all necessary permits required by said ordinances relating to the execution of work under this contract.

The specifications are not intended to describe every detail of construction. The Contractor shall, therefore, furnish and place all pipes, traps, fixtures, fittings, supports, bolts or devices, of every description, which may be necessary to fully complete the entire work, whether said details are particularly specified or not.

Where pipes or fittings are to be walled in or pass through the walls, floor or roof of the structure the Contractor shall install all such pipes and fittings, when and as ordered by the Engineer, so that the work may be proceeded with simultaneously and as fast as the work under other contracts is executed. All such work so installed shall be properly capped temporarily so as to be kept free from all debris or other clogging material.

Materials.

(Eb2) All materials used in the construction of work under this contract shall be of the best grade in established use for the purposes furnished.

All wrought iron piping shall be Byers genuine wrought iron pipe, or equal of standard weight and thickness for the various sizes specified or required. All pipe shall be smooth on the inside, free from imperfections and true to shape. All threads shall be clean cut and true.

All fittings for wrought iron pipe shall be malleable iron, free from all defects with clean cut taper threads.

All unions shall be galvanized malleable iron with brass seats inserted to make brass to iron joints on all piping 2½-inch diameter and smaller.

All soil and conductor pipes shall be of extra heavy cast iron free from all defects.

Unless otherwise specified herein, all wrought-iron pipe and fittings shall be galvanized and all soil pipe shall be coated both inside and out with an asphaltum or other approved pipe dip, applied hot.

All fixtures shall be of the specified quality, properly set in place, connected up and left in perfect working order upon completion of the work.

Placing of Pipes.

(Eb3) All pipes shall be carefully and properly placed and graded. All risers, returns and drops shall be erected plumb and straight. A liberal number of unions shall be used on wrought-iron pipe work to permit the ready removal of any section of pipe.

All pipe shall be neatly supported by hangers or fastenings of approved design, to be furnished by the Contractor at his own expense.

The screwed joints of water piping shall be made tight with a paste of graphite and engine oil. The screwed joints of gas piping shall be made tight by applying a pure red lead paste.

Where exposed pipes pass through the walls, floors or ceilings, nickel-plated plates or collars shall be used. Where screws or anchor bolts are used to attach piping, supports or fixtures to walls, lead plugs shall be used, into which the bolts or screws are to be inserted. The use of wooden plugs will not be permitted.

Valves.

(Eb4) All gate valves shall be of the double disc type of Crane Company make, or equal, with rising stems, fitted with hand wheels. All valves under three (3) inches in size shall be of brass except the hand wheel, which shall be of iron. The valves three (3) inches in size or over shall be of cast iron with full brass mountings. All valves shall open by turning to the left. All valves shall be packed with approved materials, and left in good working condition upon completion of the work.

Compression Wall Hydrants.

(Eb5) The Contractor shall furnish and install three (3) brass compression wall hydrants of Crane Company B8860 type or equal, with bent hose nozzle, as indicated on the drawings and as directed by the Engineer. One each shall be installed near the north and south corners of the station on its west wall and one near the middle of the station on the east wall, each about two (2) feet above grade line. They shall be three-quarter (¾) inch size, provided with wall flanges and loose keys for turning on and shutting off the water. The holes through walls for inserting

the hydrants shall be drilled by the Contractor.

I—SANITARY PLUMBING.

General.

(Eb6) The sanitary plumbing shall include the water closets, urinal, shower bath, drinking fountain, lavatory and sink, together with all taps, vents, revent piping, soil and waste pipes, hot and cold water faucets and valves, and all necessary fittings and fixtures.

The catalog numbers of fixtures referred to in these specifications are those of the L. Wolff Mfg. Co. of Chicago. Other fixtures of equal quality and finish may be used, subject to the approval of the Engineer.

All marble work will be furnished and placed by the Sanitary District under another contract.

Waste, Drain, Vent and Revent Piping.

(Eb7) All waste and drain pipes shall be of standard weight wrought-iron pipe, Durham system, with standard Durham cast-iron drainage fittings. The pipe and fittings shall be coated inside and out with hot asphaltum vanish or an approved pipe dip. All vent pipes, except those included with fixtures, shall be galvanized wrought-iron with galvanized malleable iron fittings as specified.

The fixtures are to be trapped and connected with waste and soil pipes led to discharge chamber as shown on plans.

The waste, vent and revent pipes shall be two (2) inches, inside diameter. The soil and vent pipes shall extend above the roof and shall be flashed perfectly watertight at the roof line with four (4) pound sheet lead flashings. The pipes shall be supported in and upon the walls or ceilings, as the case may be, with suitable galvanized pipe supports and hangers, at proper intervals. All cast iron pipe shall be caulked at joints with oakum and molten lead to make a perfectly tight joint. All revent pipes shall be connected into soil and vent pipes and shall be concealed in the walls and back of marble partitions.

The soil and urinal waste pipes shall be provided with clean-out openings at the floor line or at other convenient locations with brass caps screwed in place.

Water Closets.

(Eb8) The water closets shall be the No. A-1324 "Superior" or equal syphon jet duroware lipped bowl closets with No. 8 "Vitlow" tank with operating lever and china handle, brass flush connection, No. 5 quarter sawed oak sanitary seat with cast brass box hinges, reinforcing rings, three-eighths (⅜) inch iron pipe size, seamless brass supply pipe with stop valve, floor screws and china caps. All exposed metal parts shall have "Wolffloid" white finish or equal.

Each water closet and shower bath compartment door shall be provided with a No. H-8935 combination bumper and coat hook. In each water closet compartment a No. H-6278 toilet paper holder shall be securely fastened to the marble partition slabs with suitable brass bolts. All of these fittings and bolts shall have "Wolffloid," or equal, white finish.

Lavatory.

(Eb9) The lavatory shall be the No. H-3525 "Monument" vitreous "Virginia" or equal, equipped with apron, bowl and overflow integral with "Monument" vitreous leg with iron rod, two (2) enameled iron wall supports with brass screws and toggle bolts, two (2) No. H-912 "Gielow," or equal, self-closing faucets with china index handles, one and one-quarter (1¼) inch cast brass trap to wall with cast brass escutcheon, No. H-5165 supply pipes and stop valves, chain stay, chain and rubber stopper. All exposed metal parts above the lavatory shall be duro-white metal and all metal parts below shall have "Wolffloid," or equal, white finish.

Shower.

(Eb10) One (1) shower with "Niedecken" mixer, or equal, is to be mounted on the marble wainscot, provided with one-half (½) inch supplies to wall, one-half (½) inch mixing pipe, ball joint and a four (4) inch cast brass perforated head with removable face. Two (2) combination hooks shall be installed on the wall in the dressing room compartment. All exposed metal is to be of the "Wolffloid," or equal, white finish. The floor slab of marble in the shower compartment is to drain to the center into a No. H-2121 trap, enameled on the inside and provided with a white metal strainer.

Urinal.

(Eb11) The urinal shall be a No. H-8529, Class B, one part, porcelain urinal, twenty-four (24) inches wide and forty-eight (48) inches high, with integral drip receptor, glazed inside and on exposed parts outside, with cast brass waste outlet connection and porcelain strainer, No. H-2121 drum traps enameled inside and painted outside. The flushing tank shall be of vitreous china, automatic in action, with cast brass angle supports and with brass flush pipe and flush connection. All exposed metal shall be of "Wolffloid," or equal, white finish.

Slop Sink.

(Eb12) The slop sink shall be No. H-8137, eighteen (18) by twenty-two (22) inch size, cast iron roll rim sink with integral back twelve (12) inches high. The sink shall be provided with two (2) inch adjustable trap standards with outlet tapped for two (2) inch wrought iron pipe and shall be enameled inside and out, with white metal cast brass strainer and two (2) five-eighths (⅝) inch white metal "Quaturn" compression faucets with metal handles. One faucet shall be provided with a three-quarter (¾) inch hose connection.

Drinking Fountain.

(Eb13) A No. 6945 vitreous china pedestal drinking fountain shall be placed where shown on the plans and as directed by the Engineer. This fountain shall be thirty (30) inches high with vitreous china bubbling cup, concealed waste and supply pipes and with white metal self closing valve with loose key stop cock to control water supply.

II—SERVICE WATER SYSTEM.

General Description.

(Eb14) The Contractor shall furnish, deliver and install all the service water system, consisting of the taps to the city main, the service pipe from the city street main, and the cold and hot water distribution piping in the pumping station, with all valves, fittings and connections, complete, with appurtenances as specified herein or indicated on the drawings accompanying these specifications.

The operating pressure to be carried by the service water system will be the normal pressure from the street service main which is approximately thirty (30) pounds per square inch. The system shall, however, be capable of standing any pressure which may be put upon it by the City of Evanston, without leaking, up to sixty (60) pounds per square inch.

Service Pipe.

(Eb15) The Contractor shall obtain from the Commissioner of Public Works of the City of Evanston all necessary permits and pay all fees for completely installing and connecting up the service piping for supplying the pumping station.

The Contractor shall have made two (2) 1-inch taps in the city main on Elmwood avenue and shall furnish and place the required corporation cocks, to which the service pipe shall be connected.

The service pipe shall be "strong lead" of one and one-quarter (1¼) inch internal diameter and shall weigh not less than four and three-quarters (4¾) pounds per lineal foot. It shall extend from the street main to one (1) foot inside the outer basement wall. The service pipe shall be equipped with a curb valve and shut-off box the cover of which shall bear the words "City Water." The Contractor shall furnish and install an approved water meter in the basement with a master check and waste cock between the meter and the end of service pipe.

All work and material entering into the installing of the service pipe and meter shall be in accordance with the established rules and regulations of the Department of Public Works and shall meet the approval of the Commissioner of Public Works of the City of Evanston.

Cold Water Header and Connections.

(Eb16) The distributing header from the meter connection shall be one and one-quarter (1¼) inch. It shall run the full length of the building, reducing in size as indicated on the drawings and provided with the necessary distributing connections. Each connection taken from the distributing header shall be equipped with a union and gate valve, and the following connections shall be provided and completely connected up to the particular apparatus to be served: A one (1) inch line for supplying the heating boiler and a one (1) inch line to the three-quarter (¾)

inch branch line on the east basement wall for serving the two (2) three-quarter (¾) inch hose drops at the gallery floors, and the three-quarter (¾) inch compression wall hydrants on the east side of and near the center of the building. Three-quarter (¾) inch connections shall be provided to the hot water tank, to the hose drop at north end of boiler room, to the two (2) compression wall hydrants on the west side of and near the north and south ends of the building, and to the flow control valve. A three-quarter (¾) inch connection with three-quarter (¾) inch branches to the water closets, and a one-half (½) inch branch to the shower bath. There shall be provided a three-quarter (¾) inch connection with a one-half (½) inch branch to the urinal and a three-quarter (¾) inch branch to slop sink. Three-quarter (¾) inch connections shall also be provided to each of the recording and indicating water columns for flushing as indicated on the drawings. One-half (½) inch connections shall be made to the drinking fountain and to the lavatory.

The Contractor shall also install the two (2) three-quarter (¾) inch supply lines between the flow control valve and the fourteen (14) inch hydraulically operated gate valve.

The connection to the hot water tank and to the heating boiler shall each be equipped with a check and pressure relief valve.

Check and waste cocks shall be provided in the main header just in front of the supply leads to the toilet room fixtures, and also in the main header near the outlet at the meter.

All hot and cold water piping shall be made up with galvanized wrought-iron pipe and galvanized malleable iron fittings.

Water Hose and Appurtenances.

(Eb17) The Contractor shall furnish and deliver at the pumping station four (4) fifty (50) foot lengths of three-quarter (¾) inch garden hose, each length equipped with approved hose couplings made of stamped heavy brass. The hose shall be reinforced with four (4) plies of braided jackets of twisted cotton yarn between which and on the inside and outside is a layer of fine rubber vulcanized into a solid tube. It shall be guaranteed to be non-kinking regardless of bending or twisting or pulling around sharp corners. The Contractor shall furnish with the above garden hose four (4) cast brass spray nozzles of the needle valve type for regulating the discharge from a solid stream to a fine spray. He shall also furnish two (2) lawn sprinklers with a standpipe five (5) feet high. They shall be of James B. Clow & Sons make, catalogue No. A-7168 or equal. The Contractor shall also furnish two (2) hose reels with strong tubular frames with all joints electrically welded. The drums shall be made of galvanized iron not less than nine (9) inches in diameter and each shall have a capacity of one hundred (100) feet of three-quarter (¾) inch garden hose.

Hot Water Header and Connections.

(Eb18) The distributing header shall be connected at the top of the hot water storage tank in the northwest corner of basement and run the full length of the pumping station. It shall be three-quarter (¾) inch in size, provided with the necessary distributing connections. Each connection shall be equipped with a union and gate valve, and the following connections shall be provided and completely connected up to the particular apparatus to be served: A three-quarter (¾) supply to the slop sink and one-half (½) inch supplies to each the lavatory and shower.

The connection of the distributing header to the hot water storage tank shall be equipped with a union connection and a gate valve, and also a check and waste cock.

Pipe Covering and Painting.

(Eb19) All cold water piping shall be covered with wool felting not less than one-half (½) inch thick, over which shall be drawn smooth an eight (8) ounce canvas duck covering securely fastened and held in place by suitable lacquered metal bands.

All hot water piping shall be covered with an approved standard section eighty-five (85) per cent asbestos fibre, or a genuine eighty-five (85) per cent magnesia covering, in sections three (3) feet in length and covered over with an eight (8) ounce canvas duck covering, drawn smooth and securely fastened and held in place by suitably lacquered metal bands. All section joints shall be properly sealed.

Both the cold and hot water pipe covering shall be painted with one (1) coat of white lead and linseed oil of a color to be approved by the Engineer.

All other piping and other metal work in the basement and not required to be covered shall be painted with three (3) coats of approved asphaltum varnish or other approved rust-resisting paint, in addition to any shop coat. All surfaces must be perfectly clean and dry when paint is applied.

III—GAS FITTING AND WATER HEATER.

General.

(Eb20) The Contractor shall furnish and install one (1) automatic gas water heater, gas and water piping and connections, valves, fittings, trimmings, and all appurtenances necessary for the successful operation of the water heating equipment, complete, as specified herein.

Water Heater.

(Eb21) The heater shall be of the combined automatic storage and heater unit type, Ruud No. 30 automatic storage combination, as manufactured by the Ruud Manufacturing Company or equal. The heater shall be of the spiral coil construction with an exposed heating surface of not less than four and ninety-one hundredths (4.91) square feet.

The coils shall be made of three-quarter (¾) inch number nineteen (19) gauge copper tubing. The ends of the coils shall be brought out through the heater shell and terminate into a common manifold with union connections. Brazed joints and connections will not be permitted.

The burners shall be durable and efficient, provided with an adjustable air inlet. A properly arranged pilot jet, rigidly mounted in the heater shell shall be provided.

The shell of the heater shall be made of heavy cast iron, with a durable sheet metal lining, providing a dead air space as insulation. The top head of the shell shall have a three (3) inch diameter collar for fitting a vent stack to same. The Contractor shall furnish and install the vent stack complete. It shall be made of heavy galvanized stove-pipe iron, equipped with a shut-off damper, and shall be connected into the side of the smoke flue from the heating boiler as directed by the Engineer.

Hot Water Tank.

(Eb22) The hot water tank shall have a storage capacity of forty (40) gallons. It shall be made of galvanized sheet charcoal iron, thoroughly insulated with a layer of ground cork not less than one (1) inch in thickness. The tank and its insulation shall be incased in a neat and well reinforced heavy galvanized sheet iron jacket. The tank shall be supported in a vertical position on a neat substantial heavy cast iron pedestal equipped with a bracket for supporting the heater. The arrangement shall be such as to give a neat and compact water heating unit.

Trimmings and Connections.

(Eb23) The tank shall be equipped with an approved thermostatic moment valve, properly mounted on the side of the storage tank. The valve shall be designed to regulate the water temperature and gas supply so that when the water in the tank has reached the temperature at which the moment valve is set, the gas supply will be shut off and remain shut off until the temperature of the water has dropped approximately twenty (20) degrees Fahrenheit, when the moment valve will open full and supply the heater with gas until the water has reached the temperature at which the valve is adjusted.

The Contractor shall also furnish and install on the hot water tank in a conspicuous location an approved thermometer graduated to read from sixty (60) to two hundred and twenty (220) degrees Fahrenheit. Necessary piping and connections shall be provided on the tank consisting of two (2) three-quarter (¾) inch connections in the top of the tank, one each for cold and hot water. A three-quarter (¾) inch drain connection shall be provided in the bottom of the tank, equipped with a three-quarter (¾) inch brass compression bibb cock fitted with three-quarter (¾) inch hose threads. Water circulating piping between the heater and tank shall be one (1) inch with necessary fittings.

Piping and Fittings.

(Eb24) The Contractor shall furnish and install all pipe and fittings to completely install the water heat-

ing equipment, as indicated on the drawings and specified herein, from the gas meter to the heater.

All piping shall be galvanized wrought iron with galvanized malleable iron fittings. All bronze gas cocks of an approved make shall be installed where necessary or as directed in the gas line. Valves will not be permitted in a gas line.

A three-quarter (¾) inch gas supply pipe from the moment valve shall be run up to an elevation approximately the height of the top of the storage tank and terminate with a three-quarter (¾) inch tee with the openings fitted with pipe plugs as directed by the Engineer.

The Sanitary District will furnish and install the gas supply line from the street main into the building up to the gas meter and will make the connection between the meter and supply pipe to heater.

IV—CONDUCTOR PIPES AND HEADS AND MISCELLANEOUS FLOOR DRAINS.

Conductor Pipes.

(Eb25) The Contractor shall furnish and install the conductor pipes, fittings and heads as indicated on the plans, to remove the rain water from the roof. The conductor pipes shall be four (4) inches, inside diameter, extra heavy cast-iron soil pipe, coated inside and out with an approved asphaltum dip. They shall be installed by the Contractor as the work of constructing the walls of the station is carried on. All joints shall be filled with oakum and molten lead and shall be caulked perfectly watertight. The conductor pipes and all necessary fittings shall be properly supported in the walls at every joint with suitable galvanized iron pipe supports. The Contractor shall keep the top ends of pipes properly capped as the work is carried up, to prevent them from becoming clogged with wood, mortar or other material of any kind during the construction of the building. After the entire work is completed the Contractor shall demonstrate by actual test that all of the conductor pipes are open and free from all obstructions.

Conductor Heads.

(Eb26) The heads of conductor pipes at the roof shall consist of type No. 6 Holt roof vent and leader connections as manufactured by the Barrett Co., or equal. These roof connections shall have cast-iron strainers, gravel stops, copper flashings, strainer fittings and expansion joints all complete. They shall be installed at proper elevations, well fitted to conductor pipes and otherwise constructed and placed in accordance with the specifications of the manufacturer. The roof connections shall be left in perfect condition and watertight upon completion of the work. All necessary patching is to be done in the concrete roof around connections, by the Contractor.

Boiler Room Floor Drain.

(Eb27) The Contractor shall furnish and install in the boiler room floor a nine (9) inch by nine (9) inch floor drain with cast iron body, top and strainer. He shall also furnish and connect up to the floor drain a three (3) inch galvanized wrought iron drain pipe which shall be run to the sump pit in the basement floor at the north end of station as indicated on the plans. Necessary supports shall be provided as directed by the Engineer.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

City Ordinances.

Art. 2. The said Contractor agrees to carry on all work provided for in this contract in strict conformity with the ordinances and rules passed by the City of Evanston covering the construction of said work, and to conform to all other regulations or ordinances of said city, and to furnish to the Sanitary District, at his own expense, all permits and certificates required by said city.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these

specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or plans.

Examination of Site.

Art. 4. All bidders for the work under this contract are required before submitting proposals to examine the site of the work and adjacent premises, and the various means of approach to the site, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing the equipment at the pumping station and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Interference.

Art. 5. The Contractor shall so conduct the work of installation that there shall be no interference with work which may be in progress under contracts with other contractors. In case of dispute between the Contractor and other contractors employed by the Sanitary District, the decision of the Chief Engineer shall be final and binding on both the parties hereto.

The Contractor shall, at his own expense, repair any damage to machinery, equipment, masonry, building, painting or other property of the Sanitary District or under construction by other contractors, occasioned by the Contractor in the execution of this contract.

The disposal of tools, material, machinery, and other supplies and appurtenances during storage and erection on the property of the Sanitary District shall be subject to the approval of the Engineer. The Contractor shall assume all responsibility for the security of everything he may have on the property of the Sanitary District.

Changes in Plans.

Art. 6. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the amount of work to be done, such increase shall be paid for as an extra as provided in Articles 7 and 8. If such alterations or omissions diminish the amount of work to be done, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 7. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for

in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed hereinbefore and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 8. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 9. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All inspection of any and all material furnished for use in work to be performed under this contract, shall be made at the site of the work after delivery of the material.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. The Engi-

neer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 10. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no wa lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art. 11. The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, and other information required by the Engineer.

Plant.

Art. 12. The Contractor shall furnish all material and supplies, plant, staging and falsework, tools and implements, teams, and care; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer, all necessary barricades, and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the lump sum or unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 13. Whenever the Contractor shall be permitted or directed to perform work at night, or on Sundays or a holiday, or to vary the period of hours during which work is carried on each day, he shall give written notice, to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 14. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, staging, falsework, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 15. The Contractor shall take whatever precaution that may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Superintendence.

Art. 16. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer, who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and plans and the orders of the Engineer, thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools, and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or un-

faithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 18. In accordance with the rules and regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employees such regulations in regard to cleanliness and the disposal of garbage and wastes, as shall conduce to their health, and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the property of said Sanitary District, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation, shall be constructed, and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 19. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 20. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 21. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote

the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912;" approved June 28th, 1913, in force July 1st, 1913 and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 22. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 23. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part in the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 24. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer

the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Co-operation.

Art. 25. It is understood and agreed that all work shall be executed in such manner and in such order or procedure as will permit of the commencement and carrying on of work of the Sanitary District and of other contractors with the least interference possible under a reasonable procedure whenever it is necessary or desirable to prosecute said work, either simultaneously with the work under this contract or otherwise. To this end the Contractor shall co-operate with and assist the Sanitary District and other contractors in every reasonable way and shall interfere as little as possible with their work in order to expedite all work of construction of the Evanston Sewage Pumping Station and all work collateral thereto. The Contractor shall so arrange his work, plant and equipment that work of the Sanitary District and of other contractors for the Sanitary District can be performed without unnecessary or unreasonable expense on account of the work, plant or equipment of the Contractor hereunder. The Contractor shall move, free of charge, his plant and equipment or any part of same whenever the Engineer shall consider reasonable and necessary for the work of the Sanitary District or other contractors. The Contractor when requested by the Engineer shall also furnish the Sanitary District and other contractors with material and with the use of plant and equipment of the Contractor at reasonable rates therefor, whenever in the opinion of the Engineer such use of such plant and equipment will not unreasonably delay or interfere with the work under this contract.

The Contractor shall not be entitled to any damages or to any anticipated profits on work dispensed with or to any extra compensation from the Sanitary District on account of any work performed by the Sanitary District, or other contractors, that is contemplated in these specifications or on the plans or that is necessary for carrying on or completion of or that in any way affects the work under this contract, provided that such work of the Sanitary District and other contractors, in the opinion of the Engineer, is performed in a proper and expeditious, or a necessary manner. The Engineer shall decide all questions between the Contractor and the Sanitary District or other contractors, and the order or carrying on the work shall always be subject to the Engineer's direction and approval. His decision upon all questions relating thereto shall be final and binding on both parties to this contract.

In case the Contractor, by his own acts or the acts of any person or persons in his employ, shall unnecessarily delay, in the opinion of the Engineer, the work of the Sanitary District or other contractors by not properly co-operating with them or affording them sufficient opportunity or facilities to perform work, as hereinbefore specified, the Contractor shall, in that case, pay all costs and expenses incurred by such parties, due to any such delays, and hereby authorizes the Sanitary District to deduct the amount of such costs and expenses from any moneys due or to become due him under this contract. The Engineer shall decide the extent of such delay or delays and amount of such costs and expenses and his decision shall be final and binding upon both parties to this contract. Nothing contained in this paragraph shall, however, relieve said Contractor from any liability or damages resulting to the Sanitary District on account of such delay or delays.

Time and Progress.

Art. 26. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor further agrees to furnish promptly all material and labor as and when ordered by the Engineer to carry out such work as is required to be placed during the construction of the building.

The Contractor agrees to prosecute promptly the work of installation of

material and equipment, as soon as the building has progressed to a point where the work can be readily prosecuted in a workmanlike manner.

Under Subdivision b, at the Evanston Sewage Pumping Station, the Contractor agrees to complete the entire work on or before April 2, 1920.

In case of any delay in the completion of the substructure and superstructure of the building or in the erection of the equipment under Divisions A, B, C, and D of the Evanston Sewage Pumping Station contracts, by other contractors, this Contractor agrees to delay the shipment and installation of material and equipment, without charge, until such time as he may be notified in writing by the Engineer to proceed.

It is understood and agreed that TIME is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 27. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division E, Subdivision b for each and every day that ive times specified in Article 26, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of TEN DOLLARS ($10.00) for Subdivision b for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case both divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the contractor shall be in default.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then Engineer shall decide the number of days said Contractor is in default and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to TIME AND LIQUIDATED DAMAGES FOR DELAYS.

Extensions or Additions.

Art. 28. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to LIQUIDATED DAMAGES, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 29. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended

for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Enginer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 30. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 30), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 30) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 31. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified, and installing the same, and award a contract therefor to the lowest responsible bidder. The cost of obtaining said material, machinery or equipment and labor, by awarding a new contract therefor, and all costs and expenses incurred by the Sanitary District in readvertising in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 32. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond

in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 33. Division E. subdivision b. For one year, subsequent to the completion of the work and the issuance of the final certificate, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 36.

Prices.

Article 34. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

SUBDIVISION B.

For furnishing, delivering and installing at the Evanston Sewage Pumping Station all the sanitary plumbing, service water piping, gas fitting and water heater and conductor pipes and heads, with all necessary supports, covering and appurtenances, complete, as specified, for the lump sum of eighteen hundred six dollars and no cents ($1,806.00).

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 35. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 36. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 33, the Engineer will certifiy to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President to be duly attested and its corporate seal to be hereunto attached.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Finance Committee.
Attest:
John McGillen,
Clerk.
(Seal)

Murphy Plumbing Company. (Seal)
By P. M. Murphy,
President.
Attest:
Robert E. Murphy,
Secretary.

Approved May 22, 1919:
H. I. Steffa,
Mechanical Engineer.
Langdon Pearse,
Sanitary Engineer.
F. L. Barrett,
Architect.
G. M. Wisner,
Chief Engineer.
Chas. E. Anthony,
Asst. Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND

Know All Men by These Presents, That we, the Murphy Plumbing Company, as principal and the Massachusetts Bonding & Insurance Company, as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of nine hundred three dollars and no cents ($903.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 22nd day of May A. D. 1919.

The Condition of the Above Obligation Is Such, That whereas the above bounden Murphy Plumbing Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 22nd day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing, delivering and installing plumbing, service piping, gas fitting and conductor pipe work at the Evanston Sewage Pumpnig Station in the City of Evanston, County of Cook, State of Illinois, as specified under Subdivision b of Division E of the attached contract.

Now, If the said Murphy Plumbing Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities,

judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Murphy Plumbing Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract; and moreover shall pay to The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Murphy Plumbing Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Murphy Plumbing Company or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Murphy Plumbing Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Murphy Plumbing Company. (Seal)
By P. M. Murphy,
President.

Robert E. Murphy,
Secretary and Treasurer.

Massachusetts Bonding & Insurance Company. (Seal.)
By Fred M. Blount,
Attorney in Fact.

Approved as to Form May 22, A. D. 1919:
Chas. E. Anthony,
Asst. Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, June 5, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance reports that it has examined and approved the bond of the Bedford Foundry & Machine Co. with the United States Fidelity & Guaranty Company thereon as surety, for the faithful performance of its contract for furnishing and delivering one traveling crane of ten tons rated capacity for the Desplaines River Sewage Treatment Works, designated as division "N" of the specifications, to The Sanitary District of Chi-

cago, and therefore recommends the passage of the following order:

Ordered, That the bond of the Bedford Foundry & Machine Co. for the faithful performance of the above specified contract, said bond being in the penal sum of $1,150.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract of the Bedford Foundry & Machine Company with the Sanitary District:

THE SANITARY DISTRICT OF CHICAGO.
CONTRACT AND SPECIFICATIONS FOR DES PLAINES RIVER SEWAGE TREATMENT WORKS.

THIS AGREEMENT, Made and entered into this 15th day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Bedford Foundry & Machine Company, a corporation organized under the laws of the State of Indiana, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached; at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing and delivering the Traveling Crane, and the apparatus, equipment and appurtenances thereto, as called for under Division N, of the attached specifications, complete, as specified, freight prepaid, on board cars, the Chicago and North-Western Railway in the Village of Maywood, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further convenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and be-

tween the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Whenever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely, for Division N, of the Des Plaines River Sewage Treatment Works.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the traveling crane, and all other fittings and appurtenances, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each division of the entire sewage treatment works are numbered, A1, A2, etc., B1, B2, etc., C1, C2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Des Plaines River Sewage Treatment Works are to be erected on property owned by the Sanitary District situated between 12th and 22nd streets, just west of the Des Plaines River and east of First avenue extended, in the Village of Broadview, County of Cook, State of Illinois.

Description.

(2) The work included under this contract and specifications consists in furnishing, delivering and erecting at the site of the Des Plaines River Sewage Treatment Works and in furnishing and delivering f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., the following:

Traveling Crane.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Contract Drawings.

(4) Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the equipment included under this contract and the foundations for same, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use. Under this head plans and information shall be furnished by the Contractor, in part, as follows:

DIVISION N.

Traveling Crane.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment

covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment to make the same conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the Contractor shall furnish to the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Prior to the issuance by the Engineer of the final certificate specified in Article 37, the Contractor shall furnish to the Engineer a set of record blue prints of the various equipment, as actually installed, for which drawings are required from the Contractor.

These drawings shall include complete wiring diagrams and such plans and elevations and sectional assemblies as may be necessary to show the size, location and method of assembly of all parts of the equipment, to facilitate the dismantling and reassembling of the same. Each part shown shall be identified by a number and each drawing shall contain a bill of material giving the name, material and number required of each part. Such dimensions shall be given on the drawings as are desirable for the proper erection and adjustment of the equipment.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Shipment.

(9) Unless otherwise notified, as specified in Article 27, the Contractor (under Division N) shall ship the material and equipment included under this contract, when ready, to the Chicago and Northwestern Railway, Maywood, Illinois, freight prepaid, consigned to the contractor named as the consignee by the Chief Engineer of the Sanitary District. All equipment shall be carefully crated, as required, and protected from dust, dirt and weather.

Guarantees.

(10) Before the completion of the work and immediately prior to the issuance of the final certificate, the Contractor shall furnish a maintenance bond or guarantee against all improper workmanship or materials, for the period stated from the date of the completion of the work, as herein specified, under Article 34. This date shall be taken as the date when the Board of Trustees of The Sanitary District of Chicago approves the final voucher of the Contractor.

SPECIFICATIONS.

DIVISION N, TRAVELING CRANE.

General.

(N1) The Contractor shall furnish, complete, ready for operation, one (1) traveling crane of ten (10) tons rated capacity, with hand operated bridge, trolley, and hoisting apparatus, with all operations of the crane to be controlled from the pump room operating floor level.

The elevation of the top of the the crane rail is +59.5 above Chicago city datum, or 14 feet above the floor at elevation +45.5.

The distance, center to center, of crane rails shall be taken as fifty-eight (58) feet.

The crane will be erected by the

Sanitary District under another division.

Runway.

(N2) The Sanitary District will furnish and place the crane rails to support the crane, including the fastenings to the girders, under another division. The Contractor, however, shall submit his clearances for approval. The runway rails will be set exactly parallel and horizontal, and at the same level, and will weigh not less than fifty (50) pounds per lineal yard. The rails will be of the standard section most recently recommended by the American Society of Civil Engineers and of the quality specified for rails in the most recent Manufacturers' Standard Specifications.

The Contractor shall furnish steel chocks where required to limit the travel of crane or trolley. The steel chocks on the crane rails will be placed by the Sanitary District.

Design.

(N3) The crane shall be capable of lifting and transporting in regular service a weight of ten (10) tons. All parts of the crane shall be of the best standard grade and design, workmanship and material, designed with a factor of safety of not less than five (5) for all maximum stresses produced by the raising, lowering or transporting of the maximum line load in any and all positions. It shall be designed to fit into the space shown on the plans, with ample clearance from the wall and roof trusses, and with the clear height of crane hook from the pump room floor.

Bridge.

(N4) The material used in the construction of the bridge shall conform to the specifications adopted by the Association of American Steel Manufacturers. The bridge shall be of a type, made up with two (2) plate girders, stiffened to be rigid and amply strong to withstand not only the direct load and impact, but also any tendency to distortion due to the location of the load with respect to the bridge and operation of bridge, trolley or hoist under full load.

Stresses of Bridge.

(N5) The girder of the bridge shall be so designed that the stress produced in the lower flange by the maximum load shall not exceed one-fifth (1-5) of the ultimate strength of the material, while the stress in the top flange shall be limited to the crippling formula usually employed for compression members and by the lateral strains due to starting and stopping of the bridge suddenly when fully loaded. Girders shall be so designed as to keep crane in perfect alignment. The section shall be such that the stresses per square inch shall not exceed 10,000 pounds for compression, nor 12,000 pounds net for tension.

Bridge Trucks

(N6) The bridge trucks shall be substantially and rigidly connected to the bridge to maintain alignment. Double-flanged wheels of cast steel or chilled cast iron shall be provided of ample size and strength to take the maximum load when the load is lifted at one end of the bridge. The faces of the wheels shall be ground true to exact diameters to secure uniform movement. They shall be fastened to suitably designed steel axles running in roller bearings, with suitable provisions for lubrication. One wheel at each end of the bridge shall be driven by a cross shaft.

A chain and pulley shall be provided to operate the drive shaft of the bridge trucks by hand from the floor (at elevation 45.5) with the entire dead and live load on the crane.

Trolley.

(N7) The trolley shall be strong and compact, provided with steel or chilled cast iron wheels, finished true and to exact diameter in the treads and running on suitable runway rails. Stops shall prevent overrunning at the ends. The axles of the trolley wheels shall run in roller bearings. The trolley shall be provided with a chain and pulley to move by hand from the floor (at elevation +45.5), the trolley and maximum live load.

The trolley may be of the single or double drum type. The drums shall be of large diameter, with turned grooves and of sufficient size to take the full length of rope without overlapping.

A flexible and durable plow-steel wire hoisting rope shall be supplied, with factor of safety of not less than seven (7). The hoisting rope shall be long enough to hoist from the

basement floor at elevation +12.0 C. C. D.

Hoisting Blocks.

(N8) The hook and block shall be of steel and of liberal size. The hook shall be ball bearing, and shall swivel freely between hardened steel plates, covered to exclude dust and dirt. The sheaves shall be fitted with steel pins and bronze bushings. The construction shall prevent the rope from leaving the sheave or binding in any way.

Gears, Pinions and Bearings.

(N9) All hoisting gears shall be cut from steel blank castings, and all pinions shall be cut from forged steel blanks.

Journals and bearings shall be of ample size symmetrically loaded, carefully fitted, and properly lubricated. Cap bearings shall be provided for all parts except the bridge truck axle bearings and the cross shaft bearings.

Painting and Protection of Parts.

(N10) All finished parts shall be protected in the shop and during transportation to prevent injury and abrasion. All injured parts shall be replaced when in the opinion of the Chief Engineer refitting will not suffice.

All parts of structural work in contact with other parts shall be given one (1) coat of red lead and linseed oil paint before assembling. All parts shall be protected from rust due to exposure or other cause until the completion of the contract. Before shipment the crane shall be given one (1) coat of shop paint, and all bright parts shall be protected with a coat of white lead and tallow.

Tests.

(N11) The crane, when erected, shall be tested by the Contractor at his expense in such ways as the Chief Engineer may require to demonstrate the compliance with contract requirements. Any part or parts failing to comply with such requirements or showing undue weakness or strain shall be corrected or removed and replaced by the Contractor until such requirements are met.

The crane shall operate satisfactorily to the Engineer under all working conditions, without any undue strain, wear or vibration.

Transportation and Delivery.

(N12) The traveling crane and appurtenances furnished hereunder shall be delivered by the Contractor at his own risk, f. o. b. cars, on the Chicago and Northwestern Railway, Maywood, Illinois, consigned to the contractor designated by the Chief Engineer.

Superintendence During Erection.

(N13) The Contractor shall furnish, at his own expense, a competent erecting engineer, who shall be on the work during the erection and the operating tests for a total of ten (10) working days, on such days as the Engineer shall designate. He shall see that the work is properly erected and shall be responsible for the correct alignment. Any additional time required and ordered by the Chief Engineer will be paid for as specified for extra work under Article 8.

Guarantee.

(N14) All equipment furnished hereunder shall be guaranteed free from mechanical defects in workmanship, design and materials, and the Contractor shall replace, without cost to the Sanitary District, any part or parts proving defective within one (1) year after the equipment has been placed in operation, in accordance with the maintenance bond for this purpose specified under Article 34.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Approximate Quantities.

Art. 4. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the plans herein mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall

be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with the cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. Provided, however, that for material or equipment furnished under Division N, where delivery is specified, f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., any damage done after delivery shall be repaired by the contractor furnishing the material and equipment and shall be paid for by the contractor responsible for the damage. The Engineer and his assistants shall have at all times free ac-

cess to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Provided, however, that the obligations imposed on said Contractor by this Article 20 shall not apply to claims for infringements of patents on activated sludge processes or machinery or equipment used in connection therewith.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such inquiries or damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death

suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912;" approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said

Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 27. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor for Division N hereby agrees to deliver the traveling crane to the railroad within one hundred and fifty (150) calendar days from the said date of approval of the bond.

The words "deliver to the railroad" or "deliver" as used in this article shall be understood to mean delivery f. o. b. cars, The Chicago and North-Western Railway, Maywood, Illinois.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 28. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division N within the respective times specified in Article 27, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of ten dollars ($10.00) for Division N for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case two or more divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the Contractor shall be in default.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to time and liquidated damages for delays.

Extensions or Additions.

Art. 29. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 30. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays of such suspension or sus-

pensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 31. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 31), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 31) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

FORFEITURE OF CONTRACT.

Division N.

Art. 32. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery or equipment herein specified and award a contract therefor to the lowest responsible bidder, or the Sanitary District may purchase on the open market at the lowest price then obtainable, such quantity or quantities of material, machinery or equipment as the said Contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The cost of obtaining said material, machinery or equipment, if the same is obtained by awarding a new contract therefor or if so purchased on the open market, and all costs and expenses incurred by the Sanitary District in purchasing and delivering such cable, material, machinery or equipment in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 33. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and

sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Division N. For one year, subsequent to the completion of the operating tests and the acceptance of the equipment included under this contract, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition precedent to the final payment specified in Article 37.

Prices.

Art. 35. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

DIVISION N.

TRAVELING CRANE.

For furnishing and delivery, complete, of the traveling crane with appurtenances, as specified, f. o. b. cars, the Chicago and North-Western Railway, Maywood, Ill., the lump sum of twenty-three hundred dollars ($2,300).

The traveling crane will be fabricated at Bedford, Indiana, in the shops of Bedford Foundry and Machine Company.

The Contractor guarantees that the crane to be furnished under this contract will work satisfactorily under all the conditions proposed without any undue strain, wear or vibration. The Contractor guarantees the workmanship and the strength and quality of all materials entering into its construction, agreeing to make good at his own expense all damages caused by defects in the same during the erection of all the machinery and electrical equipment and during the maintenance period of one year after acceptance of said crane. The Contractor agrees that defective parts shall not be patched or repaired, but shall be replaced with new parts wherever and whenever ordered by the Chief Engineer during said periods, it being understood that they must be operated in the proper manner and not loaded above their rated capacity.

The Contractor further agrees that in the event that the crane, or any part thereof, shall fail to conform to the requirements of the specifications in any particular, the Sanitary District shall have the option of rejecting said crane or of accepting the same at such reduced price, as will in its judgment fully compensate for such failure to meet the guarantees.

If the Sanitary District shall elect to reject any part or all of the crane which fall below the guarantees, the Contractor agrees that they shall remain in place and be operated by the Sanitary District until other apparatus which does compiy with the guarantees is furnished.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 36. Division N. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the completion of the erection and the operating tests, and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract, provided however, that said twelve and one-half (12½) per cent so reserved may be paid to said Contractor at the expiration of thirty (30) days from the completion of delivery f. o. b. cars, the C. and N. W. Ry., Maywood, Ill., with the consent of the Chief Engineer and the sureties on the bond of the Contractor, in which case said bond is to remain in full force to the completion of the operating tests and the final acceptance of the equipment included under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where unit prices are specified, the estimate shall be based on the quantities estimated. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 37. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 34, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, on the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President to be duly attested and its

corporate seal to be hereunto attached.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Finance Committee.
Attest:
JOHN MCGILLEN,
(Seal) *Clerk.*

BEDFORD FOUNDRY AND MACHINE COMPANY, (Seal)
ED. A. SOLIN,
President.
Attest:
FRED E. PITMAN,
Secretary.

Approved, May 22, 1919:
H. I. STEFFA,
Mechanical Engineer.
LANGDON PEARSE,
Sanitary Engineer.
G. M. WISNER,
Chief Engineer.
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, the Bedford Foundry and Machine Company as principal and United States Fidelity & Guaranty Co., as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of eleven hundred and fifty dollars and no cents ($1,150.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 15th day of May A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden Bedford Foundry & Machine Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 15th day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the Furnishing and Delivering The Traveling Crane, of 10 ton capacity, f. o. b. cars, The Chicago and North-Western Railway, in the Village of Maywood, County of Cook, State of Illinois, as specified under Division N of the attached contract.

Now, if the said Bedford Foundry and Machine Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Bedford Foundry and Machine Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, except insofar as all liability on account of claims for infringements of patents on activated sludge processes or machinery, or equipment used in connection therewith, is expressly exempted; and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries

or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Bedford Foundry and Machine Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Bedford Foundry and Machine Company, or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Bedford Foundry and Machine Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

BEDFORD FOUNDRY AND MACHINE COMPANY, (Seal)
ED. A. SOLIN,
President.
FRED E. PITTMAN,
Secretary.

UNITED STATES FIDELITY & GUARANTY COMPANY, BALTIMORE, MD., (Seal)
By LOUIS W. WITTE,
Attorney-in-Fact.

Approved as to form, May 22, A. D. 1919:
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the Clerk of the Sanitary District issued his checks on the Continental & Commercial National Bank to the order of the following named employes of the Sanitary District for services rendered, in the sums stated, as follows:

February 14, 1919, check No. 236, order of Charles J. Case.....$50.00
February 28, 1919, check No. 973, order of R. L. Walsh..... 27.68
March 15, 1919, check No. 443, order of R. T. Kelly..... 65.00

which checks have been lost or mislaid.

The payment of said checks has been stopped at the bank and said employes have offered to indemnify the Sanitary District and the Clerk from all loss if the Board will authorize the Clerk to issue new checks in the place of the ones so lost or mislaid.

Your Commitee having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk of the Sanitary District be and he is hereby authorized and directed to issue new checks in the several sums stated payable to the persons above named and deliver the same to them in payment of salaries due them on their executing bonds to be approved by the Attorney to indemnify the Sanitary District and the Clerk from all loss occasioned thereby in a sum double the amount of each check.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board a form of lease between the Chicago Ship Building Company and the Sanitary District, under the terms of which said Company leases to the Sanitary District, for a nominal consideration, a piece of land 100 feet square on Goose Island, just east of Halsted street, on the north bank of the North Branch of the Chicago River, with a right of way thereto over other land of said Company, for a period of one year from May 1, 1919, but determinable by said Company on its giving the Sanitary District sixty days' notice in writing that it desires said lease terminated. Said piece of land is to be used by the Sanitary District as the site of an experimental station to test and analyze trade waste coming from an adjacent tannery.

Your Committee having considered said lease, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute said lease in duplicate, the same having been heretofore executed by said Company.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the Carl John Stein Co. with the Hartford Accident & Indemnity Company thereon as surety, for the faithful performance of its contract for furnishing, delivering and installing the plumbing service piping, gas fittings and conductor pipe work at the Calumet-Sewage Pumping Station for the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the Carl John Stein Co., for the faithful performance of the above specified contract, said bond being in the penal sum of $4,221.00, be and the same is hereby approved, and it is further

Ordered, That the form of said con-

tract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract of the Carl John Stein Company with the Sanitary District:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR PLUMBING, SERVICE PIPING, GAS FITTING AND CONDUCTOR PIPE WORK FOR CALUMET SEWAGE PUMPING STATION.

THIS AGREEMENT, Made and entered into this 22nd day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Carl John Stein Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement, free from all claims, liens and charges whatsoever, in the manner and under the conditions hereinafter specified, that are necessary for furnishing, delivering and installing the Plumbing, Service Piping, Gas Fitting and Conductor Pipe Work as called for under Subdivision a of the attached specifications, complete, as specified, at the Calumet Sewage Pumping Station of the Sanitary District of Chicago, in the City of Chicago, County of Cook, State of Illinois.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specifications and the plans, which plans are signed, and attached hereto. The specifications and drawings furnished by the Contractor with his proposal and the additional drawings or prints and other information to be furnished by the Contractor in accordance with Section 4 of the specifications are made a part of this agreement. The said specifications, plans, drawings or prints are intended to co-operate, and any work appearing in or upon the one and not mentioned in the other, shall be executed according to the true intent and meaning of the said specifications, and plans, drawings or prints, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose calculations said quantities and amounts (including extras) of the work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of said

Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the word "Contractor" is used, spelled with a capital "C," it shall be understood to refer to the Contractor under this contract, namely for Subdivision a, at the Calumet Sewage Pumping Station.

Wherever the words "the work" or "the equipment" are used herein, they shall be interpreted to mean the plumbing, service piping, gas fitting and conductor pipe work, and all other fittings and appurtenances, including all materials, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the plans, the specifications and drawings furnished by the Contractor with his proposal, and the additional plans and information furnished by the Contractor under Section 4 of this contract, in full compliance with the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specifications following the number referred to in the parenthesis.

The general sections are numbered consecutively. The particular sections describing the various items of each subdivision for all the plumbing, service piping, gas fitting and conductor pipe work are numbered, a1, a2, etc., b1, b2, etc., respectively, to correspond to the division.

Whenever, under the provisions hereof, an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

GENERAL SPECIFICATIONS.

Location of Work.

(1) The Calumet Sewage Pumping Station is now under construction on property owned by the Sanitary District situated about eleven hundred (1100) feet north of the junction of 127th street and Indiana avenue, in the City of Chicago, County of Cook, State of Illinois. The property on which the station is located is immediately adjacent to the main line of the Illinois Central Railroad.

Description.

(2) The work included under this contract and specifications consists in furnishing, delivering and installing at the Calumet Sewage Pumping Station the following: Plumbing, service piping, gas fitting and conductor pipe work, as specified under Division E, subdivision a, of the Calumet Sewage Pumping Station contract.

The Contractor shall also furnish all appurtenances to said items specified or necessary to make the work complete in accordance with the most modern practice.

Provisions for Handling Equipment at Site.

(3) At the Calumet Sewage Pumping Station, the Sanitary District will provide access on an unpaved road to the station site, for teams, from Michigan avenue on the west, and will provide and maintain a spur track from the Illinois Central Railroad. A hand operated crane equipped with an electric hoist will be available for handling the equipment to be installed in the pump room. The Contractor shall operate this, however, at his own expense and shall properly oil and maintain it during his use thereof.

The Contractor shall, at his own expense, provide any temporary blocking, supports or other protection for the station floor necessary to prevent injury to the same, and shall make good at his own expense any damages done by him to the station structure or its appurtenances in unloading and installing any of the equipment included under this contract, or in removing plant or other property or in cleaning up.

The Contractor shall furnish such protections as may be necessary against damage in any way to the equipment included under the contract after the same has been installed, and shall be fully responsible for such equipment until its final acceptance.

The Contractor shall also furnish his own storage facilities.

Contract Drawings.

(4) The specifications and plans are intended to cover complete equipment. It is not the intent to give every detail in the plans and specifications. The Sanitary District will not be responsible for the absence of any detail the Contractor may require, or for any special construction which may be found necessary as the work progresses. No additional compensation will be allowed for material or labor used in performing any work hereunder unless the work can be clearly shown to be beyond the intent and scope of the plans and specifications, to the satisfaction of the Chief Engineer.

Within thirty (30) days after the approval by the Board of Trustees of the Sanitary District of the bond of the Contractor, he shall submit to the Engineer, for approval, additional drawings or prints in duplicate, of the final layouts included under this contract, other than that for which working drawings are given in the plans attached hereto by the Sanitary District, together with other information in such detail as may be necessary to permit the Engineer to inform himself of the design of the same and the character of the various materials which the Contractor proposes to use.

The Contractor shall make such changes in the above drawings as may be found necessary upon inspection by the Engineer to make the same conform to the specifications, or to the station layout, at his own expense. Prior to the approval of any such drawings any work which the Contractor may do on the equipment covered by the same shall be at his own risk, as the Sanitary District will not be responsible for any expense incurred by the Contractor in changing equipment or layout to make the same conform to the drawings as finally approved.

The Contractor shall also furnish the Engineer tabulated lists, from time to time, showing the name of the manufacturer and the catalog number and type of equipment proposed, together with such prints, dimensions, specifications, samples, or other data, as may be required to permit intelligent judgment of the acceptability of the equipment and materials proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this contract, and the equipment furnished shall be in conformance with the same; provided, that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the Contractor from his responsibility for the proper fulfillment by any equipment of the requirements of this contract and of the purpose for which said equipment is installed, nor from his liability to replace the same should it prove defective.

Checking Drawings.

(5) The Contractor shall check all dimensions and quantities on the drawings furnished by the Sanitary District or by himself, and shall notify the Engineer of all errors or omissions which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

Co-operative Service.

(6) The sub-structure and superstructure of the pumping stations will be erected by the contractor under Division A of the Calumet Sewage Pumping Station. As the work progresses, from time to time, material called for under this contract (Division E, subdivision a) will require placing in the concrete, brickwork, or elsewhere, as necessary to properly complete the structure. The purpose of this contract is to provide for the labor and material required from time to time for this work, as specified herein, and to secure prompt service.

The Contractor under Division E (subdivision a) shall co-operate with the contractor under Division A by promptly placing all piping included under this contract, where it passes through or lies in walls, floors, roofs, or other parts of the building. Promptly upon notice from the Engineer, the Contractor shall furnish and place material as required, and shall securely line up and fasten any piping in concrete forms. He shall also rough in piping to be bedded in walls as required. He shall furnish labor and material, as required from

time to time to keep step with the work under Division A.

The Contractor shall further give in advance to the Engineer all information needed as to boxes, chases, holes, gullets, or other openings needed in the work to be placed by the contractor under Division A.

The Contractor shall keep posted on the progress of the work under Division A, and shall be ready at all times upon demand to supply labor and material as required at the proper time without delay.

Under existing contracts, the Sanitary District expects to have the Calumet Sewage Pumping Station building roofed in by January 30, 1920, and the pumping station completed by July 28, 1920. These dates are not guaranteed, however, but are stated as approximate.

Shipment and Installation.

(7) Upon notification, the Contractor shall from time to time deliver the equipment included under this contract upon the station grounds, shall unload the same, providing all necessary labor, power, blocking, hoisting apparatus and other material, shall place the same in a position as called for on the drawings and as directed by the Engineer, shall line up and adjust the various parts one to another, complete all joints and do all other work necessary to completely install and prepare for operation all the equipment included under this contract, and afterwards shall take down and remove from the premises any scaffolding, tackle, blocking or other apparatus which may have been used in the installation, but which is not a part of the equipment included under this contract.

Cutting, Fitting and Patching.

(8) The Contractor under subdivision a of Division E shall, whenever possible, give in advance definite and exact information to the Engineer so that the Engineer can instruct the contractor under Division A (the substructure and superstructure) to leave the required holes, chases or boxes as the work progresses. Should any cutting be required through the neglect of the Contractor under Division E to give the necessary information to the Engineer, sufficiently in advance, the Contractor shall have the work done, at his own expense, by the appropriate trade. Excessive cutting will not be allowed. Only sharp tools suitable for the purpose shall be used. No beams, purlins, joists or other structural features shall be cut without the express permission of the Engineer and then only when and as directed.

All work shall be neatly fitted. Excessive openings will not be permitted.

The Contractor shall have all patching done by the appropriate trade at his own expense.

Tests.

(9) The Contractor shall make all tests required to demonstrate the tightness of his work under the working conditions specified. Where pipes are to be painted, coated or jacketed, after erection, the tests shall be made first. The Contractor shall furnish, at his own expense, all apparatus, water, and appurtenances necessary or proper for all tests, except the gauges. All joints shall be examined and all visible leaks stopped.

SPECIFICATIONS.

DIVISION E—SUBDIVISION A.

Description.

(Ea1) The work to be done under this division of the Calumet Sewage Pumping Station contract includes the plumbing service piping, gas fitting and conductor pipe and drain work as specified herein under the following heads:

I. Sanitary Plumbing.
II. Transformer Oil Drains.
III. Service Water Piping.
    1. Low Pressure System.
    2. Lawn Sprinkling System.
    3. High Pressure System.
IV. Gas Fitting and Water Heater.
V. Compressed Air Piping.
VI. Conductor Pipes and Heads.

All the work specified under subdivision a of Division E shall be executed in a thoroughly first-class manner, strictly in accordance with the ordinances of the City of Chicago and the rules and regulations of the Department of Health of the City of Chicago. The Contractor shall take out all permits required by said ordinances, rules or regulations, at his own expense.

The specifications are not intended to specify every detail of construction or equipment. The Contractor shall, therefore, furnish and place all

pipes, traps, fixtures, fittings, supports, bolts, or devices which are necessary to fully complete the entire work, whether said details are particularly specified or not.

Wherever the construction of the pumping station or appurtenances thereto requires pipes or fittings to pass through walls of whatever kind, or to be imbedded in work, the Contractor shall install all such pipes or fittings when and as ordered by the Engineer, so that the work may proceed at the same time and as fast as the work under other contracts. All such work so installed shall be neatly capped temporarily so as to be kept free of all debris or other clogging material.

Materials.

(Ea2) All materials used in the construction of work under this contract shall be of the best grade in established use for the purposes furnished.

All wrought iron piping shall be Byer's genuine wrought iron pipe or equal, of standard weight and thickness for the sizes specified or required. All pipe shall be smooth inside, free from imperfections and true to shape. All threads shall be clean cut, straight and true.

All fittings for wrought iron pipe shall be malleable iron, free from all defects, with sound clean threads.

All unions shall be of galvanized malleable iron with brass seats inserted to make brass to iron ground joints on all piping 2½-inch diameter and smaller.

All soil pipe shall be extra heavy cast-iron free from all defects and shall be caulked at joint with oakum and molten lead, perfectly water tight.

Unless otherwise specified herein, all wrought-iron pipe and fittings shall be galvanized and all soil pipe shall be coated both inside and out with an asphaltum or other approved pipe dip, applied hot.

Placing of Pipes.

(Ea3) All piping shall be carefully placed and properly graded. All risers, return risers and drop shall be erected plumb and straight. A liberal number of unions shall be used to permit ready removal of any sections. All pipe shall be neatly supported by hangers or fastenings of approved design. Screwed joints on water piping shall be made tight with a paste of graphite and engine oil and screwed home. Screwed joints on gas piping shall be made tight with red lead paste. Nickel plated floor, wall and ceiling plates shall be used at all points where pipes pass through the floor, ceiling or walls.

Where screws or anchor bolts are used to attach piping, supports or fixtures to walls, lead plugs shall be used in the wall holes to screw into. The use of wooden plugs will not be permitted.

Valves.

(Ea4) All gate valves shall be of the double disc type of Crane Co. make, or equal, with rising stems, fitted with hand wheels. Gate valves under three (3) inches in size shall be of brass, throughout, except the hand wheel, which shall be of iron. Gate valves three (3) inches and over shall be of cast iron with full brass mountings, of the outside screw and yoke pattern where possible. All gate valves shall open by turning to the left.

All gate valves shall be packed by the Contractor with approved materials, and left in good working condition upon the completion of the work.

Check valves shall be of the standard pattern made by the Crane Co., or equal, for the given service. All check valves two (2) inches in size and under shall be of brass throughout. All check valves over two (2) inches in size shall be iron body, with brass facings. Swing check valves shall be used where ordered by the Engineer, in the sizes over 2-inch.

I—SANITARY PLUMBING.

General.

(Ea5) The sanitary plumbing shall include all the hot and cold water piping required for sanitary purposes, together with all valves, fixtures including water closets, urinals, shower baths, drinking fountains, lavatories, sinks, taps, vents, revent piping, soil and waste piping, etc.

The catalog numbers of fixtures referred to in these specifications, unless otherwise specified, are those of the L. Wolff Mfg. Co. of Chicago. All fixtures and appurtenant equipment or finish, unless otherwise specified, shall be of the L. Wolff Mfg. Co.,

make, or equal.

All marble work will be furnished and placed by the Sanitary District under another contract.

Pipes.

(Ea6) The hot and cold water supply pipes and the vent pipes, except those included with the fixtures, shall be of galvanized wrought iron with galvanized malleable iron fittings as specified.

All waste and drain pipes except those included with fixtures, shall be of standard weight wrought iron pipe, Durham system, and standard Durham cast iron drainage fittings. The pipe and fittings shall be coated inside and out with hot asphalt varnish or an approved pipe dip.

The fixtures are to be trapped and connected with waste pipes led to the dry weather channel of the suction chamber, as shown on the plans.

The waste, vent and revent pipes shall be two (2) inches inside diameter, and the soil pipes shall be four (4) inches inside diameter. The soil and vent pipes shall extend above the roof of the one-story portion of the building. The pipes shall be supported on the walls with galvanized iron pipe holders spaced every five (5) feet. All revent pipes shall be connected into soil or vent pipes, and shall be concealed in the brick walls. Where vent pipes pass through the roof they shall be carried up at least twelve (12) inches above roof and flashed with four (4) pound sheet lead. This flashing shall extend under roofing not less than twelve (12) inches in all directions and turned down four (4) inches in the pipes.

The soil pipe and urinal waste pipes shall be provided with clean-out openings at the floor line with brass caps screwed in place. These clean-outs shall be placed where easily accessible and the face of caps shall be flush with floors or walls.

Water Supply Pipes and Connections.

(Ea7) The Contractor shall provide a two (2) inch cold water pipe from the four (4) inch main in the northwest basement room to the main toilet room, and install a one and one-half (1½) inch main supply pipe in the toilet room with a three-quarter (¾) inch supply line to the toilet room for the engineers. From the cold water supply pipe, branches shall be run to fixtures and outlets as follows: A one and one-half (1½) inch branch to the hose drop in north end of the store room, one (1) inch branch to hot water storage trank, three-quarter (¾) inch branches to slop sinks and water closet tanks and one-half (½) inch branches to urinals, lavatories, shower baths and drinking fountains.

The Contractor shall install a one (1) inch hot water pipe system in the main toilet room and a three-quarter (¾) inch line to the engineers' toilet, parallel to cold water lines, including circulating pipe. The hot water supplies shall be one-half (½) inch to lavatories and shower and three-quarter (¾) inch to slop sinks.

Valves.

(Ea8) Valves shall be as specified in Section Ea4. In addition to the valves shown on the plans, a separate valve shall be placed on each water supply pipe to the various fixtures and outlets. The main supply pipes shall be provided with brass check and waste cocks so that the entire water supply system may be shut off and all pipes drained of water.

Water Closets.

(Ea9) The water closets shall be the No. a-1324 "Superior," or equal, syphon jet duroware lipped bowl-closets with No. 8 Vitreous "Vitlow" tank with operating lever and china handle, brass flush connection, No. 5 quarter sawed oak, sanitary seat with cast brass box hinges, reinforcing rings, ⅜-inch iron pipe size seamless brass supply pipe with stop valve, floor screws and china caps. All special metal parts shall have "Wolffloid," or equal, white finish.

Each water closet and shower bath compartment door is to be provided with a No. H. 8935 combination bumper and coat hook. In each water closet compartment a No. H. 6278 toilet paper holder shall be securely fastened to the marble partition slabs with suitable brass bolts. All of these fittings and bolts shall have "Wolffloid," or equal, white finish.

Lavatories.

(Ea10) The lavatories shall be the No. H. 3525 "Monument" vitreous "Virginia," or equal, equipped with apron, bowl and overflow with "Monument" vitreous leg with iron rod, two (2) enameled iron wall supports with

brass screws and toggle bolts, two (2) No. H. 912 "Gielow," or equal, self-closing faucets with china index handles, one and one-quarter (1¼) inch cast brass trap to wall with cast brass escutcheon, No. H. 5165 supply pipes and stop valves, chain stay, chain and rubber stopper. All exposed metal parts above the lavatories shall be duro-white metal and all metal parts below shall have "Wolffloid," or equal, white finish.

Shower.

(Ea11) One shower with "Niedecken" mixer, or equal, is to be mounted on the marble wainscot, provided with one-half (½) inch supplies to wall, and one-half (½) inch mixing pipe, ball joint and a four (4) inch cast brass perforated head with removable face. Two combination hooks in the dressing room compartment are to be installed on the wall. All exposed metal is to be of the "Wolffloid," or equal, white finish.

The floor slab of marble in the shower compartment is to drain to the center into a No. H. 2121 trap enameled on the inside and provided with a white metal strainer.

Urinals.

(Ea12) The urinals shall be No. H. 8529, Class B porcelain urinals, each twenty-four (24) inches wide and forty-eight (48) inches high, with integral drip receptor, glazed inside and on exposed parts outside, with cast brass waste outlet connection and porcelain strainer, No. H. 2121 drum traps enameled inside and painted outside. The flushing tank is to be of vitreous china, automatic in action, with cast brass angle supports and with brass flush and spreader pipes with flush connection. All exposed metal shall be of "Wolffloid," or equal, white finish.

Slop Sinks.

(Ea13) The slop sinks are to be No. H. 8137, eighteen (18) by twenty-four (24) inch size, cast iron roll rim sinks with integral backs twelve (12) inches high. The sinks shall be provided with two (2) inch adjustable trap standards with outlets tapped for two (2) inch wrought iron pipe and shall be enameled inside and out with white metal cast brass strainer and two (2) five-eighths (⅝) inch white metal "Quaturn" compression faucets with metal handles. One (1) faucet on each sink is to be provided with hose connection.

Drinking Fountains.

(Ea14) A No. H. 6945 vitreous china pedestal drinking fountain shall be placed in the locker room where directed by the Engineer. It shall be thirty (30) inches high with vitreous china bubbling cup, concealed waste and supply pipe and with white metal self-closing valve with loose key stop cock to control water supply.

The Contractor shall also furnish a drinking fountain, similar to the one specified for locker room, which shall be installed on the station grounds near the south entrance to the building as specified in Section Ea23.

II—OIL DRAIN FOR TRANSFORMERS.

General.

(Ea15) The Contractor shall furnish all materials and install complete the transformer oil drain system as shown on the drawings and specified herein.

Pipe and Fittings.

(Ea16) All piping shall be standard weight galvanized wrought iron pipe with galvanized malleable iron tees and elbows, as specified in Section Ea2. Pipe plugs shall be of bronze with taper pipe threads. Unions shall be of galvanized malleable iron with brass seats inserted to make brass to iron ground joints.

Valves and Cocks.

(Ea17) The gate valves indicated on the drawings at each transformer will be furnished by the Sanitary District and the Contractor's work on the oil drains will begin from the gate valves. The Contractor shall furnish and install in the oil drain from each transformer a standard iron cock with brass plug No. 324 of Crane Co., or equal, make.

III—SERVICE WATER SYSTEM.

General Description.

(Ea18) The Contractor shall furnish, deliver and install the entire service water system, consisting of both the high and low pressure systems in the station and the sprinkling systems for the station grounds, with all valves, fittings and connections, complete, with appurtenances, as specified herein or indicated on the

drawings accompanying these specifications, and shall install the steel water tank which will be furnished and delivered by the Sanitary District at the pumping station, outside the building.

With the exception of the lawn-sprinkling system, as specified in Section Ea25, all service water piping shall be made up with galvanized wrought-iron pipe and galvanized malleable iron fittings.

1. Low Pressure System.

General.

(Ea19) The low pressure system shall include that part of the service water piping, which under normal conditions will operate at the City of Chicago water main pressure of approximately thirty (30) pounds per square inch. The low pressure piping will, however, have a by-pass connection from the high pressure piping and shall be so installed and equipped that a pressure of one hundred (100) pounds gauge pressure can be applied to the low pressure piping continuously, without injury to any of the parts.

Main Header and Connections.

(Ea20) The six (6) inch water supply main leading to the station will enter at the northwest corner of the building on an elevation of approximately six (6) feet above Chicago City Datum. The Contractor shall begin his work at this point by installing a six (6) inch gate valve and continue the pipe line the length of the basement room. He shall provide a three (3) inch connection to each of the pressure pumps with a gate valve in each connection; a three (3) inch connection with gate valve to station lawn piping, and a four inch (4) inch by-pass connection properly valved between the high and low pressure headers. From the six (6) inch incoming main specified above the Contractor shall install a four (4) inch header running east through the west wall of the main pump room and under the balcony at the north end of the pump room to the east wall of the station. The Contractor shall install the following connections from the above four (4) inch header, with a gate valve provided in each connection: A two (2) inch connection to the toilet main specified under Section Ea7 of these specifications; a two and one-half (2½) inch connection at west wall of main pump room, and a two (2) inch connection at the east wall of main pump room for the water seal headers, and from the end of the four (4) inch header shall be run a one and one-half (1½) inch line through east station wall into the boiler room to be connected with a one (1) inch line into the boiler feed header installed by the Sanitary District near west wall of boiler room. At a point near the connection to the boiler feed header, a three-quarter (¾) inch drop shall be installed, terminating with a three-quarter (¾) inch hose valve at the elevation given by the Engineer. From the one (1) inch line there shall be run a three-quarter (¾) inch riser through the roof slab of the boiler room terminating with a three-quarter (¾) inch garden hose valve of Crane Co. No. 58 make, or equal. The riser shall be equipped with a check and waste cock of Crane Co. No. 806 make, or equal.

Near the center of the north pump room wall the Contractor shall make a one and one-half (1½) inch connection from the four (4) inch header. This connection shall run through the wall and drop to an elevation above the screen room floor as directed by the Engineer, and terminate with a one and one-half (1½) and a three-quarter (¾) inch hose valve.

The Contractor shall also install a one and one-half (1½) inch hose drop at the north end of the main store room and on the east wall of the boiler room complete with one and one-half (1½) inch hose valves as directed by the Engineer.

Headers for Sealing Water.

(Ea21) Beginning at the two and one-half (2½) inch valved connection from the four (4) inch main the Contractor shall install a union and run a two and one-half (2½) inch header on the west wall of the pump room up to a connection provided for pumping unit No. 6, and at an elevation as directed by the Engineer. From the two and one-half (2½) inch header there shall be provided a one and one-quarter (1¼) inch connection with gate valve and union to each of the three (3) centrifugal pumps, which shall be split into two three-quarter (¾) inch branches with a gate valve

in each branch, each branch connecting with a gland on a pump.

From the end of the two and one-half (2½) inch header at pumping unit No. 6, the Contractor shall install a gate valve and union and continue with one and one-half (1½) inch line up to the southwest corner of pump room, terminating with a three-quarter (¾) inch hose valve as directed by the Engineer.

In the northwest corner of pump room a three-quarter (¾) inch hose drop, with hose valve near pump room floor level, shall be installed as directed by the Engineer.

On the east wall of the pump room there shall be installed a two (2) inch sealing water header from the connection provided on the four (4) inch main in the northeast corner of the pump room. This header shall be similar in construction to the sealing water header on the west wall of pump room, with connections and branches to each of the centrifugal and vacuum pumps. The Contractor shall also install a three-quarter (¾) inch hose connection on the east wall near the vacuum pumps, as directed by the Engineer.

2. Lawn Sprinkling System.

General.

(Ea22) The Contractor shall furnish and install all of the flush hydrants or street washers and lay the water pipe, make necessary excavations and refilling to complete the lawn sprinkling system as indicated on the drawings and specified herein. The sprinkling system under normal conditions will operate at the City of Chicago water main pressure of approximately thirty (30) pounds. The system shall, however, be so installed and equipped that it can be operated at a pressure of one hundred (100) pounds continuously without injury to any of its parts.

Mains and Connections.

(Ea13) From the three (3) inch connection provided on the incoming line in the northwest corner of station, a three (3) inch main shall be run west through the basement wall at an elevation approximately six (6) feet below grade to the two (2) inch pipe line running north and south on the west side of the station grounds. A one (1) inch drain connection with gate valve shall be provided on the three (3) inch main just inside the station wall. This drain shall be run to the catch basin provided in the floor of the northwest basement room. A two (2) inch line shall be laid across the north and south sides of the station grounds and connect to the east side of the pipe loop which shall be a one and one-half (1½) inch line.

The Contractor shall install the drinking fountain specified in Section Ea14 at the south end of the station and connect same into the two (2) inch main with a one (1) inch line. He shall provide a shut-off cock with cast iron service box and wrench in the one (1) inch line, and install a drain pipe of the proper size from the drinking fountain to the twelve (12) inch drain tile installed by the Sanitary District near the southwest corner of the building as directed by the Engineer.

Flush Hydrants.

(Ea24) The flush hydrants shall be bronze mounted, with a three-quarter (¾) inch garden hose connection. They shall all be of the same make, first class in every respect, of heavy and substantial material. They shall be so designed that all working parts can be taken out from the top of hydrant. Each hydrant shall be equipped with an automatic valve to allow the barrels to completely drain. The cover shall be provided with a locking arrangement. The Contractor shall furnish with each hydrant a combined key and wrench.

Pipe and Fittings.

(Ea25) All pipe used for the station grounds sprinkling system shall be standard weight wrought-iron pipe, coated with asphaltum, applied in a hot dip, with recessed galvanized malleable iron fittings as specified in Section Ea2 of these specifications. Unions shall be installed as directed by the Engineer to facilitate laying or removal of pipe in case of a break in the mains. Unions shall be Crane Co. No. 515 make, or equal, made of galvanized malleable iron with brass hexagon ring and brass seat ring with ground joint.

All pipe joints shall be given a coat of hot asphalt and covered with burlap and a second coat of hot asphalt over the burlap.

The one and one-half (1½) inch

main laid on the east side of station shall be at an elevation of approximately eighteen (18) inches below grade and all of the mains shall be so pitched as to properly drain back to drain connection in the station.

3. High Pressure System.

General.

(Ea26) The high pressure system shall include that part of the service water piping which under normal operating conditions will have a pressure of approximately one hundred (100) pounds per square inch, and which is intended for serving the cylinders on the sluice gates and hydraulically operated gate valves, and the hydraulic plunger elevator.

Main Header and Connections.

(Ea27) The Contractor shall begin the installation of the high pressure system at the discharge connections on the pressure pumps located in the northwest basement room. The discharge connections from these pumps shall be properly equipped with check and gate valves with all joints flanged, and shall connect into a common four (4) inch pressure main. This four (4) inch main shall run each through the west wall and up to the east wall of the pump room. The Contractor shall complete the four (4) inch by-pass connection between the high and low pressure systems specified in Section Ea20. A four (4) inch connection with gate valve shall be provided for a branch main, from the main header which shall rise through the floor up to the ceiling of the locker room near its southeast corner. A check and gate valve shall be installed in the main header between this four (4) inch branch connection and the above specified by-pass connection. The four (4) inch branch main shall run south through the toilet and store rooms and over the suspended ceiling of the office into the gate room in the southwest corner of the station. The four (4) inch main shall be continued over the suspended ceiling of the vestibule into the southeast gate room. A three (3) inch branch header provided with a gate valve shall be run to each group of sluice gates located in the store room, southwest and southeast gate rooms and the southeast corner of pump room. Each of the three (3) inch branch headers shall have a two (2) inch by-pass properly valved through a hand pressure pump as directed by the Engineer. The hand pressure pumps will be furnished by the Sanitary District but shall be installed by the Contractor.

The Contractor shall furnish and install the necessary control and waste piping for the sluice gate cylinders with a four-way control cock. The four-way cocks shall be iron body with brass plug and cap, No. 339, of the Crane Co. make, or equal. There shall be furnished with each cock a suitable wrench for operating same.

A steel water tank twenty (20) feet long by six (6) feet in diameter will be furnished by the Sanitary District and installed by the Contractor in the screen room. This tank shall be connected into the four (4) inch pressure main with a four (4) inch connection properly valved so that the storage water in the tank can be fed back into the pressure main under air pressure for operating the hydraulic cylinders on sluice gates and gate valves. The Contractors shall also provide a one (1) inch drain with gate valve at the bottom of the storage tank, the drain pipe so arranged that the water will drain into the intake basin.

At the east wall of the pump room the Contractor shall provide a three (3) inch connection with gate valve from the four (4) inch main, with a two (2) inch by-pass properly valved through a hand pressure pump as directed by the Engineer. This hand pump will be furnished by the Sanitary District but shall be installed by the Contractor.

The above three (3) inch header shall be run along the east wall of the pump room up to the south centrifugal pump, with a one and one-half (1½) inch branch equipped with gate valve and union and necessary control and waste piping for each hydraulically operated gate valve. A four-way control cock shall be installed for controlling each gate valve with a suitable wrench for each. The cocks and wrenches shall be similar to those specified above for the sluice gates.

From the end of the four (4) inch main at the northeast corner of the pump room the Contractor shall install a two and one-half (2½) inch gate valve and run a pressure line the full size of valve through the boiler room and along its east wall

to the elevator pit and make the proper connection to the control valve for the hydraulic elevator.

Pipe Covering and Painting.

(Ea28) All cold water piping, except such piping in the basement store room as may be designed by the Engineer, shall be covered with wool felting not less than one-half (½) inch thick, over which shall be drawn smooth an eight (8) ounce canvas duck cover securely fastened and held in place by suitable lacquered metal bands. All points shall be properly sealed. The covering shall be painted with one (1) coat of white lead and linseed oil of a color to be approved by the Engineer. The balance of the exposed metal work shall the painted with a coat of filler and one (1) coat of enamel or bronze of a color to be selected. All piping and other metal work installed by this Contractor in the basement store room and not required to be covered with felting shall be painted with three (3) coats of approved asphaltum varnish or other approved rust-resisting paint, in addition to any shop coat. All surfaces must be perfectly clean and dry when paint is applied.

Water, Hose and Appurtenances.

(Ea29) Water hose consisting of garden hose and hose of the underwriters' standard, with necessary fittings and parts, as specified herein, shall be furnished by the Contractor.

Garden hose shall be three-quarter (¾) inch in size, in fifty (50) feet lengths. Ten (10) lengths shall be furnished, each equipped with approved hose couplings made of stamped heavy brass. The hose shall be reinforced with four (4) plies of braided jackets of twisted cotton yarn between which and on the inside and outside is a layer of pure rubber vulcanized into a solid tube. It shall be guaranteed to be non-kinking regardless of bending or twisting or pulling around sharp corners. The Contractor shall furnish with the above garden hose five (5) cast brass spray nozzles of the needle valve type for regulating the discharge from a solid stream to a fine spray. He shall also furnish five (5) lawn sprinklers with a standpipe five (5) feet high, of the James B. Clow & Sons make, catalog A-7168 or equal. The Contractor shall also furnish five (5) hose reels made with strong tubular frames with all joints electrically welded. The drums shall be made of galvanized iron not less than nine (9) inches in diameter and with a capacity of one hundred (100) feet of three-quarter (¾) inch garden hose.

The hose of underwriters' standard shall be one and one-half (1½) inch size in fifty (50) foot lengths. Three (3) lengths shall be furnished, each equipped with approved hose couplings of heavy brass, and a heavy brass plain hose pipe. The hose shall be made of unlined woven linen, with no rubber in its construction, of the very best grade obtainable on the market for emergency fire protection, to be folded on racks when idle.

The Contractor shall furnish and install three (3) hose racks for the underwriters' hose as indicated on the plans. The racks shall be of the swinging wall type, made of steel tubing and malleable iron castings, with a hump in the center of the bottom to take the weight off the folds of hose. The front shall be partly enclosed, making it impossible to jerk too much hose off at once. The racks shall be given a finishing coat of paint after erection of a quality and color as directed by the Engineer.

IV—GAS FITTING AND WATER HEATER.

General.

(Ea30) The Contractor shall furnish and install one (1) gas water heater, complete, with water storage tank, gas and water piping and connections, valves, fittings, trimmings and all appurtenances necessary for the successful operation of the water heating equipment, complete, as specified herein.

Water Heater.

(Ea31) The heater shall be of the combined automatic storage and heater unit type, Ruud No. 50, automatic storage system, as manufactured by the Ruud Manufacturing Company or equal. The heater shall be of the spiral coil construction with an exposed heating surface of not less than seven and eighty-five hundredths (7.85) square feet.

The coils shall be made of three-quarter (¾) inch number nineteen (19) gauge copper tubing. The ends of the coils shall be brought out through the heater shell and terminate

with a common manifold with union connections. Brazed joints and connections will not be permitted.

An efficient and durable burner with adjustable air inlet openings, equipped with a properly arranged pilot jet, rigidly mounted in the heater shell shall be provided.

The heater shell shall be constructed of heavy cast iron, with a sheet metal lining, providing a dead air insulation. The top of the heater shell shall be equipped with a collar for fitting a vent stack to same. The Contractor shall furnish and install the vent stack complete. It shall be made of heavy galvanized stove-pipe iron, carried up through the roof of the one-story section of the building and terminate in an approved vent head with heavy copper flashing. The heater shall be mounted on a firm and neat appearing standard.

Hot Water Tank.

(Ea32) The hot water tank shall be made of galvanized sheet charcoal iron not less than one-quarter (¼) inch in thickness. It shall be approximately twenty (20) inches in diameter, with a capacity of eighty (80) gallons. The tank shall be supported in a horizontal position on a neat and well braced pipe frame. The tank shall be thoroughly insulated with a layer of ground cork one and one-half (1½) inches in thickness. The tank with its insulation shall be incased in a neat and well reinforced heavy galvanized sheet iron jacket.

Trimmings and Construction.

(Ea33) The tank shall be equipped with an approved thermostatic moment valve, properly mounted. The valve shall be so designed that it will regulate and control the water temperature and the gas supply. The regulation shall be such that when the water in the tank has been brought to the temperature at which the moment valve is set, the gas supply will be shut off and remain shut off until the temperature of the water has dropped approximately twenty (20) degrees Fahrenheit, when the moment valve will open full and supply the heater with gas until the water has reached the temperature at which the valve is adjusted.

The Contractor shall also furnish and install on the hot water tank in a conspicuous location, an approved thermometer graduated to read from sixty (60) to two hundred twenty (220) degrees Fahrenheit. Proper and necessary pipe connections shall be provided on the tank, consisting of one (1) inch hot water tap on the top side of tank and one (1) inch cold water tap at each end of the tank at the lower edge. One of the cold water taps shall be plugged as directed by the Engineer. A three-quarter (¾) inch drain connection taken from the bottom side of tank and run to the pump discharge basin directly below shall be furnished and installed, complete, with an all brass, double wedge, rising stem, three-quarter (¾) inch gate valve of an approved make. Water circulating connections between heater and tanks consisting of one and one-quarter (1¼) inch piping with necessary fittings shall be furnished and installed.

Piping and Fittings.

(Ea34) The Contractor shall furnish and install all pipe and fittings for completely installing the water heating equipment, as indicated on the drawings and specified herein and shall connect into the hot water distributing line specified in Section Ea7. The gas supply header shall be a one and one-half (1½) inch pipe line. The end of the gas supply header in the northwest corner of the locker room basement shall be capped, and shall terminate at a point directed by the Engineer. The Sanitary District will furnish and install the gas meter and gas main to the station and will make the necessary connections between gas supply header and meter. A three-quarter (¾) inch line shall be taken from the gas supply header near the southwest corner of the locker room basement and be brought up through the locker room floor and connect to a hot plate hereinafter specified in Section Ea35. At a point above the locker room floor and as directed by the Engineer, the Contractor shall install in the above three-quarter (¾) inch lead an outlet with a shut-off cock with nipple for attaching a small service gas hose. The one and one-half (1½) inch gas header shall run full size up to and be connected into the moment valve mounted on the water tank. All necessary gas supply and pilot burner piping and fittings for properly connecting the moment valve with heater shall be installed

according to the latest standard practice.

All piping used in connection with the water heater installation shall be standard weight galvanized wrought iron with galvanized malleable iron fittings as specified in Section Ea2. Unions shall be of galvanized malleable iron with brass seat insert, with brass to iron ground joint. Union elbows and tees shall be used to facilitate installation and reduce the number of joints. All bronze gas cocks of an approved make shall be installed where necessary or as directed by Engineer in the gas header and branches. Valves will not be permitted in any gas line.

Hot Plate.

(Ea35) The Contractor shall furnish and install a three (3) burner hot plate of an approved make, where directed by the Engineer. The hot plate shall be made of heavy cast iron with heavy nickel plate trim, neatly mounted on a substantial steel or iron stand of neat appearance.

V—COMPRESSED AIR PIPING.

General.

(Ea36) The Contractor shall furnish, deliver and install for the compressed air system all the piping, valves, fittings and connections, with all appurtenances and supports, complete, as specified herein and shown on the plans. He shall also install the air container tanks furnished and delivered by the Sanitary District under another contract and make the necessary connections to same.

All compressed air piping shall be galvanized wrought-iron piping and all fittings galvanized malleable iron.

Air Intake.

(Ea37) Air intake connections shall be made full size of the suction inlets of the air compressor, with a three (3) inch suction pipe which shall run vertically through the floor and up to the ceiling of the locker room, then through the outside south wall and terminate with an approved protected inlet over the toilet room roof.

Distributing Main and Connections.

(Ea38) The discharge connection from the compressor shall be two (2) inches in size, connected into the air container tank and equipped with necessary shut-off and check valves. A two (2) inch main supply header shall be run from the container tank across the north end of pump room to east pump room wall. A one and one-half (1½) inch connection shall be made from the above supply header in the basement store room and run up through the floor to the ceiling of the locker room, thence south through the toilet and store rooms and over the ceiling of the office into the southwest gate room, and over the ceiling of the vestibule into the southeast gate room, and up through the ceiling into the high tension room. Three-quarter (¾) inch leads terminating with a three-quarter (¾) inch air hose connection shall be installed near the floor in each of the store rooms, southwest and southeast gate room, and in the high tension room.

From the two (2) inch main supply header, a one and one-half (1½) inch connection shall be made at the northwest corner of the pump room. A distributing line the full size of the connection shall be run south along the west wall of pump room to a point opposite last motor at south end of pump room, and terminate with a plugged tee. Four (4) three-quarter (¾) inch air hose connections near the pump room floor shall be provided on this line, spaced approximately as shown on the plans and as directed by the Engineer. A two (2) inch branch from the main supply header shall be provided to the air container tank in the screen room. Necessary by-pass, drain and blow-off piping between the air and water tank shall be installed in a manner to give simple and safe operation of these tanks for the purpose for which they are installed.

At the northeast corner of the pump room, a one and one-half (1½) inch connection shall be made from the main supply header. A distributing line, the full size of the connection, shall run south along the east wall of the pump room to a point opposite the vacuum pump and continue from this point as a three-quarter (¾) inch line and extend up to the rheostat balcony floor at a centrally located position terminating with a plugged tee. Three-quarter (¾) inch air hose connections shall be provided on this line near the floor, one to be located at each motor for the pumping units

and one on the rheostat balcony floor.

From the end of the two (2) inch supply header in the northeast corner of pump room a three-quarter (¾) inch line shall be extended into the boiler room and along its west wall to a point near front of boilers, terminating with a plugged tee, and three-quarter (¾) inch air hose connection, as directed by the Engineer.

Valves, Hose Connections, Etc.

(Ea38) All valves shall be specially adapted for compressed air service and shall be given an air-under-water test for tightness. Shut-off valves shall be the quick opening and closing Crane mine cocks No. 318 or equal for compressed air lines. Necessary wrenches for operating these cocks shall be furnished. Check valves shall be furnished with special construction designed for compressed air service. All hose connections shall be three-quarter (¾) inch, made from wrought iron pipe nipples with hose end threaded for hose coupling. The shut-off valves for these connections shall be quick opening and closing type as specified above.

Air Container Tanks.

(Ea39) The air container tanks will be furnished and delivered to the station site by the Sanitary District, but shall be installed by the plumbing Contractor. He shall equip the tanks with all necessary parts and make all supply, drain and blow-off connections properly fitted with valves as directed by the Engineer.

Air Hose.

(Ea40) The Contractor shall furnish four (4) lengths of three-quarter (¾) inch air hose, each length fifty (50) feet long, complete with all couplings and fittings. This hose shall be specially constructed for compressed air service. It shall be flexible, tough and oil proof, both inside and outside. Material used in its construction shall be the highest grade pure elastic rubber reinforced with not less than two independent layers of braided yarn formed into a basket weave. The Contractor shall furnish with each length of air hose a nozzle made of hard fibre or other insulating material, of a pattern as approved by the Engineer.

Painting.

(Ea41) All air piping and exposed metal work in the pump room, gate rooms and main store and toilet rooms shall be painted with a coat of filler and one (1) coat of enamel or bronze of a color to be selected. All piping, container tanks and other metal work in the basement store room, screen and boiler rooms shall be painted with three (3) coats of approved asphaltum varnish or other approved rust-resisting paint, in addition to any shop paint. All surfaces must be perfectly clean and dry when paint is applied.

VI—CONDUCTOR PIPES AND HEADS.

Conductor Pipes.

(Ea42) The Contractor shall furnish and install the conductor pipes, fittings and heads as shown on the plans to remove the rain water from the roofs. These pipes shall be four (4) inches inside diameter, of extra heavy cast iron soil pipe, coated inside and out with asphaltum paint. They shall be installed by the Contractor as the work of constructing the walls of the station is carried on. All joints shall be filled with oakum and molten lead, and shall be thoroughly caulked perfectly water tight. The conductor pipes and all fittings necessary shall be properly supported in the walls at every joint with suitable galvanized iron pipe supports. The Contractor shall keep the top ends of pipes properly capped, as the work is carried up to prevent them from becoming clogged with wood, mortar or other material of any kind during the construction of the building. After the entire work is completed, the Contractor shall demonstrate by actual test that all of the conductor pipes are open and free from all obstructions.

Conductor Heads.

(Ea43) The heads of conductor pipes on the roofs shall consist of type No. six (6) "Holt" roof vent and leader connections as manufactured by the "Barrett Mfg. Co.," or equal. These roof connections shall have cast iron strainers, gravel stops, copper flashings, strainer fittings, and expansion joints all complete. They shall be installed at proper elevation, well fitted to conductor pipes and otherwise constructed and placed in accordance with the specifications of the manufacturer. These roof connections shall be left in perfect condition and watertight upon completion of the

work and all necessary patching is to be done in the concrete roof around connections by the Contractor.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The anitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

City Ordinances.

Art. 2. The said Contractor agrees to carry on all work provided for in this contract in strict conformity with the ordinances and rules passed by the City of Chicago covering the construction of said work, and to conform to all other regulations or ordinances of said city, and to furnish to the Sanitary District, at his own expense, all permits and certificates required by said city.

Omission on Plans.

Art. 3. The plans furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or plans.

Examination of Site.

Art. 4. All bidders for the work under this contract are required before submitting proposals to examine the site of the work and adjacent premises, and the various means of approach to the site, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing the equipment at the pumping station and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Interference.

Art. 5. The Contractor shall so conduct the work of installation that there shall be no interference with work which may be in progress under contracts with other contractors. In case of dispute between the Contractor and other contractors employed by the Sanitary District, the decision of the Chief Engineer shall be final and binding on both the parties hereto.

The Contractor shall at his own expense, repair any damage to machinery, equipment, masonry, building, painting or other property of the Sanitary District or under construction by other contractors, occasioned by the Contractor in the execution of this contract.

The disposal of tools, material, machinery, and other supplies and appurtenances during storage and erection on the property of the Sanitary District shall be subject to the approval of the Engineer. The Contractor shall assume all responsibility for the security of everything he may have on the property of the Sanitary District.

Changes in Plans.

Art. 6. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the amount of work to be done, such increase shall be paid for as an extra as provided in Articles 7 and 8. If such alterations or omissions diminish the amount of work to be done, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Con-

tractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and material omitted.

Extra Work.

Art. 7. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed hereinbefore and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 8. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 9. All work provided for under this contract shall be done under the direction and supervision of the En-

gineer and his properly authorized agents.

All inspection of any and all material furnished for use in work to be performed under this contract, shall be made at the site of the work after delivery of the material.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 10. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art. 11. The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, and other information required by the Engineer.

Plant.

Art. 12. The Contractor shall furnish all material and supplies, plant, staging and falsework, tools and implements, teams, and care; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer, all necessary barricades, and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the lump sum or unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 13. Whenever the Contractor shall be permitted or directed to perform work at night, or on Sundays or a holiday, or to vary the period of hours during which work is carried on each day, he shall give written notice, to the Engineer, so that proper inspection may be provided Such work shall be done under the regulations to be furnished in writing by the Engineer, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 14. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, staging, falsework, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 15. The Contractor shall take whatever precaution that may be ne-

cessary to render any portion of the work secure in every respect or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Superintendence.

Art. 16. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer, who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and plans and the orders of the Engineer thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools, and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 18. In accordance with the rules and regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employees such regulations in regard to cleanliness and the disposal of garbage and wastes, as shall conduce to their health, and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the property of said Sanitary District, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation, shall be constructed, and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 19. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 20. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in

consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 21. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912," approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 22. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 23. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part in the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work

covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days, notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 24. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Co-operation.

Art. 25. It is understood and agreed that all work shall be executed in such manner and in such order or procedure as will permit of the commencement and carrying on of work of the Sanitary District and of other contractors with the least interference possible under a reasonable procedure whenever it is necessary or desirable to prosecute said work, either simultaneously with the work under this contract or otherwise. To this end the Contractor shall co-operate with and assist the Sanitary District and other contractors in every reasonable way and shall interfere as little as possible with their work in order to expedite all work of construction of the Calumet Sewage Pumping Station and all work collateral thereto. The Contractor shall so arrange his work, plant and equipment that work of the Sanitary District and of other contractors for the Sanitary District can be performed without unnecessary or unreasonable expense on account of the work, plant or equipment of the Contractor hereunder. The Contractor shall move, free of charge, his plant and equipment or any part of same whenever the Engineer shall consider reasonable and necessary for the work of the Sanitary District or other contractors. The Contractor when requested by the Engineer shall also furnish the Sanitary District and other contractors with material and with the use of plant and equipment of the Contractor at reasonable rates therefor, whenever in the opinion of the Engineer such use of such plant and equipment will not unreasonably delay or interfere with the work under this contract.

The Contractor shall not be entitled to any damages or to any anticipated profits on work dispensed with or to any extra compensation from the Sanitary District on account of any work performed by the Sanitary District, or other contractors, that is contemplated in these specifications or on the plans or that is necessary for carrying on or completion of or that in any way affects the work under this contract, provided that such work of the Sanitary District and other contractors, in the opinion of the Engineer, is performed in a proper and expeditious, or a necessary manner. The Engineer shall decide all questions between the Contractor and the Sanitary District or other contractors, and the order of carrying on the work shall always be subject to the Engineer's direction and approval. His decision upon all questions relating thereto shall be final and binding on both parties to this contract.

In case the Contractor, by his own acts or the acts of any person or persons in his employ, shall unnecessarily delay, in the opinion of the Engineer, the work of the Sanitary District or other contractors by not properly co-operating with them or affording them sufficient opportunity or facilities to perform work, as herein-

before specified, the Contractor shall, in that case, pay all costs and expenses incurred by such parties, due to any such delays, and hereby authorizes the Sanitary District to deduct the amount of such costs and expenses from any moneys due or to become due him under this contract. The Engineer shall decide the extent of such delay or delays and amount of such costs and expenses and his decision shall be final and binding upon both parties to this contract. Nothing contained in this paragraph shall, however, relieve said Contractor from any liability or damages resulting to the Sanitary District on account of such delay or delays.

Time and Progress.

Art. 26. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor.

The Contractor further agrees to furnish promptly all material and labor as and when ordered by the Engineer to carry out such work as is required to be placed during the construction of the building.

The Contractor agrees to prosecute promptly the work of installation of material and equipment, as soon as the building has progressed to a point where the work can be readily prosecuted in a workmanlike manner.

Under Subdivision a, at the Calumet Sewage Pumping Station, the Contractor agrees to complete the entire work on or before July 28, 1920.

In case of any delay in the completion of the substructure and superstructure of the building or in the erection of the equipment under Divisions A, B, C, and D of the Calumet Sewage Pumping Station contracts, by other contractors, this Contractor agrees to delay the shipment and installation of material and equipment, without charge, until such time as he may be notified in writing by the Engineer to proceed.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of any contractor to complete his work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 27. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete work under Division E, Subdivisions a and b, within the respective times specified in Article 26, even though he is allowed to complete any one or more of said items of work, then said Contractor shall pay to said Sanitary District the sum of Ten Dollars ($10.00) for Subdivision a for each and every day that said Contractor shall be in default in the completion of said work ready for operation. Provided, however, that in case both divisions are included under this contract, the liquidated damages shall be paid only upon the division or divisions in which the contractor shall be in default.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then Engineer shall decide the number of days said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 28. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his de-

cision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 29. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 30. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 30), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 30) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 31. It is further agreed by and between the parties hereto, that if said Contractor abandons this contract or fails financially or from any other cause whatsoever, is unable to carry out the terms and conditions of this contract and is unable to complete the same or if he assigns this contract without the consent of the Sanitary District first having been obtained, then said Sanitary District may declare this contract forfeited either as to a portion of the same or the whole thereof and may readvertise for bids for furnishing and delivering the balance of the material, machinery

or equipment herein specified, and installing the same, and award a contract therefor to the lowest responsible bidder. The cost of obtaining said material, machinery or equipment and labor, by awarding a new contract therefor, and all costs and expenses incurred by the Sanitary District in readvertising in excess of the cost hereunder to said Sanitary District, shall be paid to the Sanitary District by said Contractor.

Contractor's Bond.

Art. 32. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 33. Division E. subdivision a. For one year, subsequent to the completion of the work and the issuance of the final certificate, the Contractor shall make good, at his own expense, any excessive wear to any parts, any defects in or damages to any equipment included in this contract, which may arise from faulty materials, design or construction, or from the inability of any of the equipment to successfully perform all the work put upon it within the limits of these specifications.

The Contractor shall furnish a bond in the sum of five (5) per cent of the amount of this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of this section. The execution of said bond shall be a condition percedent to the final payment specified in Article 36.

Prices.

Article 34. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work: and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

SUBDIVISION A.

For furnishing, delivering and installing at the Calumet Sewage Pumping Station all the sanitary plumbing, transformer oil drains, service water piping, gas fitting and water heater, compressed air piping, and conductor pipes and heads, with all necessary supports, covering and appurtenances, complete, as specified, for the lump sum of eight thousand four hundred forty-two dollars and no cents ($8,442.00).

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 35. The said Sanitary District agrees to pay said Contractor the sum herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final

responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificates of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

The value of the work properly performed shall be estimated by the Engineer at the end of each month. Where lump sum prices are specified, the Engineer shall estimate the proportionate part of the lump sum accomplished. To facilitate this estimate, the Contractor shall furnish the Engineer with a balanced statement in detail showing the division of cost for each of the various sub-items comprised in the lump sum.

Final Payment.

Art. 36. Upon the completion of all the work included under this contract, the performance of satisfactory operation and acceptance tests, and the execution of the bond called for in Article 33, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Finance Committee, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested, and its corporate seal to be hereunto attached.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Finance Committee.

Attest:
John McGillen,
Clerk.

(Seal)

Carl John Stein Company. (Seal)
By Carl John Stein,
President.

Attest:
A. J. Rohn,
Secretary.
Per T. D. Nolan,
Assistant Secretary.

Approved May 22, 1919:
H. I. Steffa,
Mechanical Engineer.
Langdon Pearse,
Sanitary Engineer.
F. L. Barrett,
Architect.
G. S. Brack,
Electrical Engineer.
G. M. Wisner,
Chief Engineer.
Chas. E. Anthony,
Asst. Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND

Know All Men by These Presents, That we, the Carl John Stein Company, as principal and Hartford Accident and Indemnity Company as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of four thousand two hundred twenty-one dollars and no cents ($4,221.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 22d day of May, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden Carl John Stein Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 22d day of May, A. D. 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the furnishing, delivering and installing plumbing service, piping, gasfitting and conductor pipe work at the Calumet Sewage Pumping Station, in the City of Chicago, County of Cook, State of Illinois, as specified under Subdivision a of Division E of the attached contract.

Now, If the said Carl John Stein Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Carl John Stein Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract; and moreover shall pay to The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this state by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10th, 1911; in force May 1st, 1912," approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Carl John Stein Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Carl John Stein Company or its agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Carl John Stein Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

CARL JOHN STEIN COMPANY. (Seal)
By CARL JOHN STEIN,
President.

A. J. ROHN,
Secretary.

Per F. D. NOLAN,
Assistant Secretary.

HARTFORD ACCIDENT & INDEMNITY CO.
By THOMAS W. THOMPSON,
Attorney.
And ANNA MOE,
Resident Assistant Secretary.
Approved as to Form May 22, A. D. 1919:
CHAS. E. ANTHONY,
Asst. Attorney.
C. ARCH WILLIAMS,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, to which were referred at the meeting held May 8, 1919 (page 469 of the Proceedings), bids for furnishing a five-ton motor truck to the Sanitary District reports that it has considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer and finds that the lowest responsible bidder is the Hall Truck Sales Company.

Your Committee further reports that it is of the opinion that said Hall Truck Sales Company is competent to comply satisfactorily with the terms and conditions of the contract for the furnishing said five-ton motor truck and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing the five-ton motor truck above specified be and the same is hereby awarded to the Hall Truck Sales Company for the lump sum price of $4,750.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Hall Truck Sales Company, and it is further

Ordered, That the checks of the respective bidders for furnishing said five-ton truck be returned upon the execution of said contract by the parties thereto.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the question of paying to Byrne Bros. Dredging & Engineering Company current vouchers Nos. 25 and 26 in the sums of of $6,072.50 and $3,953.25 respectively for work performed by said company in the construction of the Calumet intercepting sewer contract section, No. 6, under its contract with the Sanitary District dated June 29, 1916 (page 903 of the Proceedings).

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that by the terms of said contract the entire work should have been completed on or before May 1, 1918, but certain questions relating to delays in the performance of said work have not yet been determined. That the work actually accomplished is about 93.3 per cent

of the entire work and the reserve percentage retained by the Sanitary District under said contract is sufficient to protect the rights of the Sanitary District if said payments are made.

Your Committee further reports that said contractor also entered into a contract with the Sanitary District dated June 29, 1916 (page 864 of the Proceedings), for the construction of the Calumet Intercepting Sewer contract, section No. 5, and is behind in the progress of said work and your Committee is of the opinion that said payments of $6,072.50 and $3,953.25 should only be made to said contractor on condition that the sureties on the bonds of said contractor for the faithful performance of each of said contracts consent thereto in writing and your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw warrants in the sums of $6,072.50 and $3,953.25, payable to the order of Byrne Bros. Dredging & Engineering Company and deliver the same to said Company on the receipt of the vouchers therefor, provided the United States Fidelity & Guaranty Company, as surety on the bond of said contractor for the faithful performance of its contract for the construction of said contract, section 6, and also as surety on the bond of said contractor for the faithful performance of its contract for the construction of contract section 5 of said intercepting sewer consents in writing that said payments may be made and that all the conditions and terms of both said contracts shall remain in full force and effect.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 5, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of June payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

T. J. Forschner Contracting Company (work on Calumet Sewage Pumping Station)	$ 62,185.58
Jas. O. Heyworth (work on Section 1, Calumet-Sag Channel)	11,133.06
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	1,531.25
Nash-Dowdle Company (labor and material on temporary pumping service at Evanston, Ill.)	775.00
Hutchins Lumber & Storage Company (lumber)	97.02
Amount carried forward	$ 75,721.91

Amount brought forward		$ 75,721.91
Engineering News Record (advertising)	52.20	
The Chicago Evening Post (advertising)	9.30	
Chicago, Rock Island & Pacific Ry. (labor for installing cribbing, etc., on R. I. bridge in Blue Island)	746.44	
A. Guthrie & Co., Inc. (labor for shoring banks at abutment for C. R. & P. Ry. bridge in Blue Island)	67.77	
A. Guthrie & Co., Inc. (labor for removing tines, etc., north of Channel on line of old Chicago Central Division)	10.20	
A. Guthrie & Co., Inc. (labor for piling, sorting, bracing of old C. R. I. & P. bridge No. 3, Blue Island	3.17	
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	17,164.02	
		$ 93,775.01
Maintenance and Operation Account.		
United Asbestos & Packing Company (tools, 39th St. Pumping Station)	$ 9.55	
Stewart Ice Company (ice, 39th St. Pumping Station)	9.50	
The Lunkenheimer Company (brass glove valves, 39th St. Pumping Station)	8.46	
H. W. Johns-Manville Company (cement and rings for valve stems, Lawrence Ave. Pumping Station)	54.25	
City Collector, City of Chicago (inspection, Lawrence Ave. Pumping Station)	13.00	
John McGillen, Clerk (special roll, repairs to boilers, Lawrence Ave. Pumping Station)	132.00	
Geo. B. Carpenter & Co. (repairs)	.52	
Sweet-Wallach & Co. (neg. preservers)	3.45	
Jas. A. Sackley Company (labor and material, Kenilworth avenue bridge)	359.90	
Consumers Company (material)	69.56	
Bentley, Murray & Co. (printing)	54.00	
Auto Trimming & Printing Company (changing tops of auto)	35.00	
Jas. Carmichael (labor and material)	12.00	
		781.19
Illinois & Michigan Canal and Illinois River Conditions Department.		
E. H. Heilbron (expenses)	$ 21.24	
Public Service Company of Northern Illinois (electrical energy)	12.02	
Peoples Telephone Company (telephone service)	5.25	
A. Lucas & Sons (angles and labor)	4.16	
		42.67
Law Department.		
John McGillen, Clerk (reimburse attorney for fees paid witnesses in overflow cases)	$ 337.76	
John F. Buchner (fees recording overflow files)	4.50	
Martin Delaney (services rendered and expenses incurred)	211.55	
C. Arch Williams (cash box account of Law Department from March 15th to May 23rd, inclusive, as per statement of expenses and receipts and attached to voucher)	81.45	
		635.26
Clerical Department.		
Albert Hancock & Co. (fasteners)		3.85
General Account.		
John McGillen, Clerk (expenses of First Asst. Attorney)	$ 38.02	
John McGillen, Clerk (expenses of First Asst. Attorney)	22.77	
Leland Hotel (expenses of Attorneys Hall and Beebe)	38.75	
		99.54
Amount carried forward		$ 95,337.52

Amount brought forward		$ 95,337.52

Electrical Department.

John McGillen, Clerk (water taxes)	$ 3.75	
Chicago Telephone Company (telephone service)	338.43	
U. S. Reduction Company (wiping solder)	329.46	
National Lead Company (wiping solder)	301.62	
Electric Service Supplies Company (lightning arresters)	284.24	
The Ohio Brass Company (porcelain strain ins.)	280.80	
Norris Ward Coal Company (egg coal)	148.75	
The Texas Company (oil)	142.88	
Union Petroleum Company (gasoline)	127.10	
Buchanan-Daley Company (lumber)	120.70	
Aurilla Scully, Admx. (compensation due to death of A. A. Scully)	50.00	
Westinghouse Electric & Mfg. Company (Westinghouse relays)	45.00	
Ahlberg Bearing Company (complete car sets trojans)	41.24	
Humphrey & Sons Company (castings, gear and pinion)	39.57	
The Kellogg-Mackay Company (black malleable ells, etc.)	27.77	
L. L. Fleig & Co. (Peerless insulation, etc.)	26.25	
Jos. T. Ryerson & Son (sheeting)	21.89	
United Asbestos & Packing Company (band lining, brake)	20.79	
Stebbins Hardware Company (drills)	22.52	
Wilbur J. Connell (glass, etc.)	16.43	
David G. Murray (teaming)	16.00	
Garden City Spring Works (band bolts, etc.)	12.25	
American Blue Print Paper Company (blue prints)	10.87	
Wadsworth-Howland Company (red iron paint)	6.00	
United States Crushed Stone Company (charges for toll calls)	4.90	
Burr-Vack Company (paste brushes)	3.50	
Berger Electric Company (magnet wire)	3.00	
American Blue Print Paper Company (blue prints)	2.50	
American Blue Print Paper Company (blue prints)	2.48	
Vesta Accumulator Company (repairs on battery)	1.24	
Manning Garage (spindle bushings, etc.)	1.14	
John McGillen, Clerk (postage stamps)	119.18	
Western Electric Company (wattmeters)	225.34	
Olson & Bromstad (return of unused $50.00 deposit on raising wires to move house)	15.51	
		2,813.10

Miscellaneous Accounts.

Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 9.20		
Law Department	14.25		
Police Department	.20		
General Account	206.82		
Electrical Department	3.90		
		$ 234.37	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 28.06		
Maintenance and Operation Account	43.11		
Police Department	.70		
		71.87	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 41.28		
Maintenance and Operation Account	13.84		
		55.12	
Amount carried forward			$ 98,150.62

Amount brought forward			$ 98,150.62
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 4.62		
Clerical Department	9.60		
General Account	1.20		
		15.42	
John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 2.60		
Clerical Department	4.20		
Electrical Department	3.70		
		10.50	
			387.28
Grand Total			$ 98,537.90

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

GEO. W. PAULLIN,
MATT A. MUELLER.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel *(except as to voucher to the T. J. Forschner Contracting Company, for work on the Calumet Sewage Pumping Station, for $62,185.58, on which Mr. Sergel voted "nay")*, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance *(except as to voucher to the T. J. Forschner Contracting Company, for work on the Calumet Sewage Pumping Station, for $62,185.58, on which Mr. Nance voted "nay")* and Paullin—Seven on all vouchers and nine on all vouchers with the exceptions above noted.

Nays—None (except as above noted).

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 5, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Engineering reports that it has had under consideration the communication addressed to the Board of Trustees from the Commissioner of Public Works of the City of Chicago enclosing a report of the Division of Bridges of the City of Chicago to John Ericson, City Engineer, submitting a new layout for a bascule bridge across the south branch of the Chicago River at Twelfth street with estimates of cost and requesting the approval of the Board to the new layout.

Before giving any details of the new layout in question, the Committee deems it advisable to recount the activities of the Sanitary District with reference to building a bridge at the site in question.

As early as February, 1908, the Bridge Department of the Sanitary District made several preliminary designs of a double leaf bascule bridge at this site but it was found that very valuable railroad tracks crossing Twelfth street close to the east dock line and serving a freight house and yard north of the site would be destroyed by an abutment placed back of the dock line.

The river bends toward the east and it was desirable that the channel should be unobstructed up to the east

dock line and the bend should not be increased and navigation made more difficult, by placing an abutment in the river, which arrangement would be necessary in order to avoid large damages to railroad property that would result from blocking the railroad tracks. A single leaf bascule bridge could be built resting on an abutment on the west side of the river and with a narrow pier behind the east dock line that would not interfere with the tracks, but a 200 foot navigable channel was demanded by all interests and a very long single leaf, necessary for this width of the channel, was considered very objectionable and the idea of constructing a bascule bridge was therefore abandoned.

Again in 1909, the Bridge Department resumed its study of the situation and a vertical lift bridge was proposed at an estimated cost of $275,000.00 which provided a 200 foot clear navigable channel with the river unobstructed up to the east dock line and without interfering with the tracks on the east side of the river.

On February 21, 1910, your Committee held a hearing on the subject matter and representatives of the Chicago Association of Commerce, the Manufacturer's Association, the Lumbermen's Association and other river interests and the Chairman of the Committee on Harbors, Wharves and Bridges of the City of Chicago appeared before your Committee, an exhaustive report of the Bridge Engineer was read, sketches of the bridge inspected and all the questions involved were thoroughly discussed, pro and con and it was the unanimous opinion of the interests mentioned that the vertical lift type of bridge was the one best suited to meet the peculiar conditions of the site both as regards the railroads and the public and the vessel interests.

Following the meeting of your Committee, the Board on February 23, 1910, (page 235 of the Proceedings) adopted a report presented by your Committee and recommended that a bridge of the vertical lift type be erected at Twelfth street, designed to provide a navigable channel 200 feet wide in the clear.

On March 28, 1910, the Bridge Department received a letter from Mr. F. A. Delano, representing the Chicago Plan Commission, stating that Twelfth street would be widened and requesting that a bridge be constructed at this point eighty or ninety feet in width. Further work on the design of the vertical lift bridge was then suspended, pending the development of the Twelfth street widening project.

On September 11, 1910, at a meeting of your Committee attended by representatives of the City, the City was advised that the District was willing to construct a new bridge if the City would pay all cost of constructing a wider bridge over and above the cost of constructing a bridge within the existing sixty-six foot street.

On October 13, 1911, (page 1207 of the Proceedings) the Board of Trustees adopted a resolution that it would co-operate with the City of Chicago in the construction of a movable bridge at Twelfth street which would conform to the plans of said City for the widening of said street and that the Sanitary District would enter into a contract with the City of Chicago to be approved by the Engineering and Law Departments of the Sanitary District for doing said work and pay one half the cost thereof.

On May 24, 1912, at a conference of the Board of Trustees and the Commissioner of Public Works of the City of Chicago, it was agreed to abandon the lift bridge project and to construct a bridge of the double leaf bascule type. The City was asked to obtain the land necessary for the site

of such a bridge and during the years 1912 and 1913, negotiations were had with the Railroad Companies to obtain from them the necessary land on the east side of the river for the east abutment of such a bridge, but without success.

It became necessary in the year 1914, to provide as soon as possible, plans for an adequate wide bridge at Twelfth street to introduce in evidence in certain court proceedings for the widening of Twelfth street.

On December 28, 1914, the Finance Committee of the City Council recommended that a direct lift type of bridge be constructed at Twelfth street and the City Council adopted this type and authorized the Commissioner of Public Works to enter into a contract with the Strauss Bascule Bridge Company for plans and specifications. Preliminary plans and estimates of cost of a direct lift bridge were transmitted by the Commissioner of Public Works to the Sanitary District for approval under date of March 25, 1915.

On May 27, 1915 (page 555 of the Proceedings) the Board of Trustees of the Sanitary District passed an order that the President and Clerk be authorized and directed to enter into a contract with the City of Chicago to pay one-half the cost of such a bridge and the contract between said municipalities was adopted by the Board on December 9, 1915, (page 1763 of the Proceedings).

The cost of this bridge was estimated at $521,000.00 and included $35,000.00 for plans to be made by the Strauss Bascule Bridge Company, one half of which cost was to be paid by the Sanitary District. The sum of $10,000 has been paid to the City of Chicago on account of the work done by said Bridge Company. Bids were received by the City on the direct lift bridge design on January 10, 1917, the lowest bid being around $1,200,000.00.

A further conference between the Commissioner of Public Works and your Committee was held February 5, 1917, and it was agreed that all bids were to be rejected and new bids advertised for in the future.

On March 23, 1914, the City Council passed what is known as the Union Station Ordinance in which is a provision for the straightening of the south branch of the Chicago river by constructing a new channel from north of Taylor street to Eighteenth street. Under the terms of this ordinance there is to be no encroachment on the railroad property west of a line parallel to and distant 1086.8 feet east of the east line of Canal street between Twelfth and Sixteenth streets.

This new channel cuts off the bend of the river and lies almost entirely to the west of the present river at Twelfth street.

In designing the Strauss vertical lift bridge in 1916, it was contemplated that if and when said river is straightened the bridge would be moved bodily to the new site and placed upon a new substructure at an estimated cost of $95,000.00.

After the bids for the construction of this bridge were rejected in 1917, the Bridge Department of the City of Chicago made a further study of the situation and prepared a new layout which is the one under consideration, of constructing a bascule bridge over the existing river channel that could be utilized very largely either when the river is straightened or if it is not straightened. The present layout in substance is as follows:

The City proposes to construct a single leaf deck bascule bridge over the present river channel, the west abutment of which will lie east of and adjoining the future east dock line of the proposed new straightened channel. The east face of this abutment will be about 1384 feet east of

Canal street extending about 85 feet into the existing river measured from the west dock line in the north line of Twelfth street. This leaves room for but 140 feet width of channel to the east dock line, the channel through the bridge being considerably skewed. Owing to the presence of railroad tracks along the east dock line a bridge abutment cannot be placed in the east side of the river and only a single leaf bascule bridge can be built with its abutment on the west side of the channel.

This single leaf bascule bridge is to be so constructed that in case the river is not straightened the single leaf can be shortened and an additional east leaf constructed to be carried by an abutment located east of the tracks on the east side of the river and the east dock line can then be moved back by acquiring additional property and shifting certain of the railroad tracks, so as to provide 170 feet clear width of channel.

In case the river is straightened, instead of constructing the additional east leaf as above described, it is proposed by the City to shorten the single lead and rotate it 180 degrees on its abutment so as to face in the opposite direction to become the east leaf of a double leaf deck bascule bridge over the new channel.

It is therefore apparent that the layout of the single leaf bascule bridge under construction has been adopted by the Bridge Department of the City of Chicago in order to save and utilize most of the substructure and superstructure of the new bridge whether the proposed straightening of the Chicago river between the points above stated is or is not accomplished in the future.

To compensate for the narrow 140 foot width of navigable channel, the City of Chicago proposes to widen the river by acquiring a point of land on the west side of the river south of Twelfth street and dredging same to provide a straight channel one hundred forty feet wide, extending from north of Twelfth street through the new bridge and for a distance of 1,000 feet south of same. This will give a straighter channel for navigation purposes than would a bridge providing 200 feet clear width of channel without such widening.

To provide sufficient flow of water through the bridge during and after construction, the City of Chicago has agreed, to purchase the required land and construct a bypass behind the site of the west abutment of sufficient area to reduce the mean velocity of the flow in the river to less than one and one quarter miles per hour. It has been further agreed that this bypass shall be built before the construction of the abutment of the new bridge is commenced and shall be maintained unobstructed for as great a width as possible at all times thereafter. The City further agrees before commencing work on said abutment to extend the east arm of the existing center pier swing bridge so as to provide at least 92 feet clear width of channel at all times thereafter. This 92 feet channel together with the bypass is to provide sufficient cross section of channel to insure that the velocity of current through the bridge during construction will not be dangerous for navigation at the site of the work.

It is proposed to maintain the swing bridge in service until the south part of the new bridge is completed and in use for traffic and then to remove the swing span and complete the bridge, thereby causing the least possible interruption to street traffic.

Your Committee further reports that on April 21, 1919, your Committee held a meeting to consider the layout in question. To this meeting were invited representatives of the Chicago Association of Commerce, Chicago

Plan Commission, City Club of Chicago, the Chicago Real Estate Board, Lumbermen Association of Chicago, Lake Carriers Association and numerous officials of the City of Chicago and representatives of navigation interests in the City of Chicago.

The Chicago Association of Commerce, the Chicago Plan Commission and the Municipal Art Committee, Illinois Chapter A. I. A. presented resolutions recommending the plan of the City of Chicago for the layout under consideration, which resolutions are herewith presented to the Board and made a part of this report.

The questions involved were thoroughly discussed by representatives of the civic bodies mentioned and by persons interested in the navigation of the Chicago River and it was the concensus of opinion that the plan under discussion should be adopted with the distinct understanding that the new bridge to be constructed at Twelfth street should be of a temporary character and that the adoption by the Sanitary District of such a plan was requested so that the great public improvement of Twelfth street should not at this time be delayed until the question of straightening the Chicago river as contemplated could be finally accomplished.

Your Committee further reports that it has been the settled policy of the Sanitary District to widen the Chicago River to a uniform width of two hundred (200) feet at all points between bridges and to reduce all encroachments into the channel width of the river by way of piers, abutments or bridge protections to the minimum in order to afford a suitable waterway for navigation. And it has been the aim of the Trustees to have the work on the Chicago River as well as the main channel meet the greatest efficiency in aid of the deep waterway now under consideration and contemplated by the State of Illinois for which the people of this state have authorized for its development a $20,000,000 bond issue. The work of the District on the Chicago river and main channel forms the most important link of this waterway connecting the Great Lakes with the Mississippi river. To this end the Sanitary District has expended in its river widening policy upwards of $11,000,000. The Sanitary District has received the support of all the civic bodies of the city and river interests in carrying out this policy and your Committee is of the opinion that the policy above outlined should not be deviated from at this time, unless proper showing can be made that the design of bridge as recommended by the city engineers with an abutment extending approximately eighty-five (85) feet into the channel is for but temporary use and that within a reasonable time such encroachment as the design of bridge submitted would create would be removed, as the permission of such encroachment and bridge opening as designed of a permanent nature at the most pronounced angle of the river would be a complete reversal of past policies of the District, defeating the purpose for which millions of dollars of expenditures have been made and materially aecting the efficiency of the deep waterway contemplated.

It has been stated by representatives of the City of Chicago and representatives of various civic bodies of the City of Chicago that a proper showing can be made that the bridge design as approved by the city engineers will be but of temporary use as a result of plans now under way for the straightening of the south branch of the Chicago river and that the design of bridge recommended is designed to answer a great public demand that the improvement of Twelfth street which has cost the tax payers of the City of Chicago a vast sum of money shall not be delayed.

Your Committee further recommends the passage of the following order:

Ordered, That the Sanitary District hereby approves the new layout for the construction of a single leaf bascule bridge across the south branch of the Chicago river as hereinbefore described, *provided however,* that the City of Chicago shall make a reasonable showing that the straightening of the south branch of the Chicago river can be brought about within a reasonable time thereby making said single leaf bascule bridge of temporary use; and it is further

Ordered, That pending such showing being made the Chief Engineer and Attorney be, and they are hereby authorized to negotiate with the City of Chicago for a contract relating to the construction of said bridge which will safeguard the Sanitary District; and it is further

Ordered, That a copy of this resolution be sent to his Honor, the Mayor, and City Council, the Plan Commission, the Association of Commerce and all parties in interest.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

The following are the communications from the Commissioner of Public Works of the City of Chicago:

Subject: Bascule Bridge at 12th Street.

DEPARTMENT OF PUBLIC WORKS
COMMISSIONER'S OFFICE
CHICAGO.

June 4, 1919.

Mr. Wallace Clark, Chairman, Engineering Committee, Board of Sanitary District Trustees, Karpen Building, Chicago.

DEAR SIR—The attached letter from the Bureau of Engineering of the City of Chicago and the attached plans and drawings show definitely the fact that the single leaf bascule bridge the City proposes to construct over the South Branch of the Chicago River at 12th street will be readily convertible at any time in the near future into a part of the proposed double leaf bascule bridge spanning the river at this point, when said river is straightened in accordance with the Chicago Union Station ordinance.

In conclusion we summarize by stating that the proposed single leaf bascule bridge is temporary in location. We therefore trust that this statement is sufficient assurance from the City of Chicago that this proposed bridge is of a temporary nature only.

Yours very truly,
CHAS. R. FRANCIS,
Commissioner of Public Works.

BRIDGES: TWELFTH ST.
SUBJECT: Plans.

June 4, 1919.

Hon. Charles R. Francis, Commissioner of Public Works.

DEAR SIR—In a meeting held June 3rd in the Council Chambers in reference to the City's plan for the Twelfth Street Bridge, Mr. Wallace Clark, Chairman of the Engineering Committee of the Sanitary District of Chicago, stated that his committee stood ready to recommend the approval, by the Sanitary District Trustees, of a single leaf bridge with 140 ft. temporary channel with by-pass, shown on City's drawing No. 4NPre-701, providing the City would give a reasonable assurance that the use of the bridge to be constructed in accordance with this plan, be of a temporary nature.

In reply to this inquiry we would say that while this bridge over the present channel as a structure is permanent, its location however, is temporary. This is evident by the fact that the Bureau of Engineering of the City of Chicago, has designed a bridge in such a way that it can be turned around in the event that the present channel is moved west in accordance with the Chicago Union Station Co. ordinance and thus become the permanent east leaf over the new channel.

The channel given by the single leaf bridge layout together with by-pass gives an area of 4680 sq. ft. at a velocity of 1.17 miles per hour or 8040

cu. ft. flow per second, which is more than is given by the 200 ft. standard channel required by the Sanitary District having a cross sectional area of 4944 sq. ft. at a velocity of 1.1 miles per hour or 7995 cu. ft. flow per second.

This design is conclusive evidence that the City authorities consider this layout as an expedient to complete the Twelfth Street Improvement now.

Yours truly,
JOHN ERICSON,
City Engineer, PSC.

Recommended by:
THOS. G. PIHLFELDT,
Engineer of Bridges.
P. S. CORNBE,
Assistant City Engineer.

Mr. Clark moved that the report be adopted and the accompanying order passed, and that the communications from the Commissioner of Public Works of the City of Chicago be published with the report.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Simonds Manufacturing Company, one of the Sanitary District's oldest and best consumers, has requested the Sanitary District to furnish it with approximately 400 H. P. additional electrical energy, which request has been favorably acted upon by the Commitee on Electrical Development.

Your Committee further reports that it is advised by the Electrical Engineer that in order to comply with said request, it is necessary to purchase and install three K. V. A. 2200/220-440 volt transformers and increase the capacity in the leads from the transformers to the service switches; that he has received three bids for furnishing such transformers of a make and type similar to those now in service, which bids are herewith transmitted to the Board. The lowest of said bids is that of the Pittsburgh Transformer Company in the sum of $1,984.17 f. o. b. Pittsburgh, and he recommends that said bid be accepted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept the bid of the Pittsburgh Transformer Company in the sum of $1,984.17, to furnish the transformers above specified.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
H. E. LITTLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents renewal contracts with Edward F. Reineck, doing business as the Commercial Wall Paper Mill, two contracts,

one for power and the other for welder service with Morris Kurtzon and George B. Kurtzon, copartners doing business under the name and style of Garden City Plating & Manufacturing Company, both concerns being located at 1430 South Talman avenue, with E. C. Pronger, W. H. Pronger and H. F. Pronger, copartners doing business under the name and style of Blue Island Livery and Transfer Company and with the Advance Waterproof Cement Company, both of Blue Island, Illinois, wherein the Sanitary District agrees to furnish and said parties agree to take electrical energy for the periods of time and upon the terms and conditions therein set forth. All of said contracts have been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate the attached contracts which have heretofore been executed by said parties.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WM. J. HEALY,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the Chicago and Cook County School for Boys, one of the present consumers of electrical current of the Sanitary District, has requested the District to install a bank of transformers for furnishing electrical energy for supplying one 15 H. P. motor for operating the pumps, which furnish water for the grounds and buildings of said school, at an estimated cost of $300.00, and he recommends that said request be granted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is herey authorized and directed to furnish and install the bank of transformers above specified and perform the necessary work connected therewith, provided the total cost of the same shall not exceed the sum of $300.00.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WALLACE G. CLARK,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith transmits to the Board a form of application for use by consumers who desire to obtain electric light and limited power service.

The form in which said electrical energy is to be furnished, the term of such service, the rate, minimum charge therefor and the discount allowed, are all stated in said application and rules and regulations are indorsed on the back of said application and made a part of the same which govern the installation, inspection and care of the electrical equipment both of the consumer and the Sanitary District.

Your Committee further reports that said application provides that when it is accepted and signed by the Electrical Engineer, then the same shall constitute a contract between the applicant and the Sanitary District.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the form of application for electric light service and rules and regulations relating thereto above referred to be and the same is hereby adopted by the Board, and it is further

Ordered, That the Electrical Engineer be and he is hereby authorized to accept and sign such applications for electric light service when in his judgment the furnishing of such service is advantageous to the Sanitary District and report the same to the Board for its approval.

Respectfully submitted,

H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WALLACE G. CLARK,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, June 5, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Engineering Department.

John S. Leininger, rough carpenter, 55 cents per hour.

Michael Stradata, laborer, 45 cents per hour.

Jos. Thomas, laborer, 45 cents per hour.

Silvio Marek, laborer, 45 cents per hour.

INCREASES.

Provided for in 1919 Budget.

Police Department.

George McPherson, from patrolman at $125.00 per month to sergeant at $135.00 per month.

William Wittlieb, from patrolman at $125.00 per month to sergeant at $135.00 per month.

REINSTATEMENTS.

Due to Honorable Discharge from the U. S. Army Service.

Clerical Department.

Edward J. McCabe, stenographer, $150.00 per month.

Engineering Department.

Glen V. Munday, rodman, $115.00 per month.

Electrical Department.

Wm. D. Mackie, lineman, $165.00 per month.

TRANSFER.

Clerical Department.

Bryan Hartnett, from stenographer at $150.00 per month to stenographer and index clerk at $150.00 per month.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Cark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Passed and not voting—Mr. Sergel—One.

Report of Special Committee.

Mr. Clark presented the following report from the Special Committee appointed to carry on negotiations with reference to compromise of controversies between the Sanitary District and the United States Government:

CHICAGO, June 5, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Special Committee appointed by order of the Board to carry on negotiations with reference to compromise of controversies between the Sanitary District and the United States Government concerning the amount of the withdrawal of water from Lake Michigan by the Sanitary District makes the following report:

(1) There is attached hereto copy of letter signed by W. V. Judson, Colonel, Corps of Engineers, the District Engineer at Chicago, U. S. Army, addressed to Mr. Edmund D. Adcock, Special Attorney, Sanitary District, dated May 29, 1919. Accompanying this letter is a paper entitled "Memorandum," in which memorandum there is contained certain suggestions with reference to the sewage disposal problems of Chicago and vicinity. Paragraph 3 is the only one with which the Sanitary District is concerned. It is as follows:

"3. Chicago now disposes of its sewage by conveying it into the Illinois River, using about 8,000 cubic feet per second of Lake Michigan water. Unless steps are now taken to begin the purification of Chicago District sewage in accordance with a reasonable and progressive plan it will be necessary for the health of Chicago continually to increase the draft of water from Lake Michigan on the one hand and continually to dump the sewage of Chicago on the people of the Illinois and Mississippi valleys. The United States will doubtless meet this locality in a fair anl frank way, but at this time it is necessary to have assurance that the purifications of sewage will be begun in the very near future and continued at a reasonable rate so that twenty years from now it may not seem necessary for the protection of the health of Chicago to withdraw from the lake, to the great detriment of other interests, quantities of water which every one concerned would be compelled to call excessive. There will always be a tendency to increase the flow from Lake Michigan by reason of the advantages that would thus result to water powers already existing or to be developed between Lockport and Starved Rock. In any event, if the Drainage District be permitted, in accordance with any new policy that may be adopted, to withdraw either temporarily or for all time, more than 4,166 cubic feet per second as

now authorized by the War Department, in my opinion the Drainage District should be required to advance to the United States sufficient funds to build, maintain and operate works for the regulation of the levels of Lakes Michigan, Huron, Erie and Ontario."

A substantially identical letter, with copy of "Memorandum" above mentioned, was sent by Colonel Judson to Mr. George M. Wisner, Chief Engineer of the Sanitary District.

(2) Your Committee has considered sidered the contents of said letters and memorandum and has drafted a letter or communication to be sent to Colonel W. V. Judson, U. S. Army District Engineer at Chicago, in reply to said letters and suggestions contained in said memorandum, and recommends that a letter in accordance with the draft hereto attached be immediately signed by your Committee and sent to Colonel Judson, and, therefore, your Committee recommends the passage of the following order:

Ordered, That your Committee be and it is hereby authorized and directed to send to W. V. Judson, Colonel, Corps of Engineers, United States Army, the District Engineer at Chicago, a letter in accordance with the attached draft.

Respectfully submitted,

WALLACE G. CLARK,
GEORGE W PAULLIN,
WILLIAM J. HEALY,
PATRICK J. CARR,
Special Committee.

DRAFT OF LETTER TO W. V. JUDSON, COLONEL, CORPS OF ENGINEERS, TO BE SENT BY SPECIAL COMMITTEE ON LAKE LEVEL CONTROVERSY, WHICH IS REFERRED TO IN THE FOREGOING REPORT AND ORDER OF SAID COMMITTEE.

W. V. Judson, Colonel, Corps of Engineers, United States Army, Chicago, Ill.

DEAR SIR—The undersigned were appointed some time ago as a Special Committee to represent the Board of Trustees of The Sanitary District of Chicago to carry on negotiations looking to the compromise of controversies between the Sanitary District and the United States concerning the amount of withdrawal of water from Lake Michigan at Chicago.

The Committee has considered your letters to Mr. George M. Wisner, Chief Engineer of the Sanitary District, and Mr. Edmund D. Adcock, Special Attorney in this matter, dated respectively May 24 and 29, and also the suggestions contained in Paragraph No. 3 of "Memorandum" attached to each of said letters. The Commitee has made a report concerning the said letters and suggestions contained in the Memorandum to the Board of Trustees of the Sanitary District, and the Board has authorized by formal action the sending of this letter, the contents of which have been duly considered:

(1) The Sanitary District is not only willing, but anxious to accept the suggestion that co-operation be brought about between the Sanitary District and the United States for the purpose of finally settling all controversies having to do with the amount of the diversion of water from Lake Michigan at Chicago.

In this connection we call your attention to the ordinance duly passed and adopted by a unanimous vote of the Board of Trustees of the Sanitary District on January 5, 1918, and a copy of the Proceedings of the Board of Trustees of said date, containing copy of said ordinance, is herewith handed you. Under the ordinance mentioned the Sanitary District offered to compromise the litigation pending with reference to the Chicago diversion by paying to the United States the amount of money necessary to construct compensating works in the St. Clair and Niagara Rivers, recommended by the Board of Engineers for Rivers and Harbors in report entitled, "Final Report on Waterway from Lockport to Utica." This report was submitted to Congress by the Secretary of War in the early part of the year 1914. In consideration of the money mentioned to construct compensating works the United States was expected to fix the maximum amount of withdrawal of water at Chicago at 12,000 second feet. The compensating works were to be constructed of such size and in such manner as to compensate for the alleged lowering of lake

surfaces (Huron, Michigan and Erie, Ontario being taken care of by the Gut Dam construction), due to the withdrawal of 12,000 second feet. The cost of constructing these works was estimated in 1913 by the Engineer Corps to be approximately $475,000.00. It was understood, however, by the Board of Trustees of the Sanitary District that war conditions would make the cost considerably more, and the Sanitary District appropriated $600,000.00 in its appropriation ordinance for the year 1918 to take care of such expenditure.

The Board now stands ready to provide the money necessary either out of funds in its hands or by bond issue.

On January 29, 1918, a bill was introduced in Congress by Congressman Gallagher of Illinois, providing for the fixing of the maximum amount of withdrawal of water at Chicago on condition that the Sanitary District should defray the expense necessary to construct these compensating works according to the estimate of cost to be made by the Chief of Engineers of the United States Army and approved by the Secretary of War. This bill was later referred by the House Committee on Rivers and Harbors to the Secretary of War and the Chief of Engineers of the United States Army for consideration. The Chief of Engineers by letter dated February 15, 1918, indicated to the Chairman of the Committee on Rivers and Harbors that the bill could not be approved on the ground principally that Canada objected because of alleged lowering of the surface levels of the water in Montreal Harbor in the Lower St. Lawrence River, due, as claimed, to the Chicago diversion.

Accordingly the Chief Engineer and Attorney of the Sanitary District took up negotiations with Canadian authorities, the Harbor Board of Montreal and others for the purpose of working out some plan to which Canada, the United States and the Sanitary District might agree. After several conferences with the Chief Engineer of the Harbor Board and others at Montreal, and at Chicago, a plan was suggested which contemplated the control to some extent of the outflow of Lake Ontario. This plan comprehended the construction of a movable dam in the upper part of the St. Lawrence River, whereby a certain amount of water could be stored during nine months of the year in Lake Ontario, making it possible to deliver during September, October and November an amount considerably larger than the normal flow to the St. Lawrence River, thereby raising the levels of the Lower St. Lawrence an amount in excess of the claimed lowering due to the Chicago diversion during the said three months when navigation in the Lower St. Lawrence River requires greater depths.

The District thereupon employed Francis C. Shenehon, for a number of years head of the Lake Survey, and Dean of the College of Civil Engineering of the University of Minnesota, to draw plans for regulation works for Lake Ontario to be constructed in the St. Lawrence River, which works would accomplish the purposes mentioned. Those plans have been drawn and Mr. Shenehon has made a report to the Chief Engineer of the Sanitary District, describing and recommending the construction of certain works there, which works he states will be feasible and will accomplish the purposes desired.

Mr. Wisner, Chief Engineer of the Sanitary District, after conference with General Black in the early part of July, presented a letter setting forth in a preliminary way the basis of the position taken by the District for a compromise of the difficulties existing between the United States and the Sanitary District. To this letter was attached a letter from the Secretary of State, enclosing certain papers having to do with the negotiations between the United States and Great Britain relative to Canadian boundary waters. A copy of said letter of the Chief Engineer of the Sanitary District to General Black is herewith handed you. In the latter part of October, 1918, Colonel Mehaffey of the Engineer Corps, U. S. Army, and Professor Phelps visited Chicago and inspected the works of the Sanitary District for the diversion of sewage, drainage and water from Lake Michigan.

Recently Generals Black and Taylor, Colonel W. V. Judson and others inspected the works of the District.

A brief is being prepared in accordance with the understanding with the Chief of Enginers, wherein all the historical facts relating to this controversy will be collated and there will be set forth the reasons for the District's position taken in the negotiations for a compromise of the controversies mentioned. The brief will also contain suggestions concerning the method of compensating for the alleged lowering of lake sur-

faces (Huron, Michigan and Erie), and also with reference to the best method of taking care of alleged damage to Canadian navigation interests if the United States considers that under all the circumstances Canada has any right at this time to make any objection. We believe that a consideration of the various steps taken in the negotiations for the treaty of 1909 between Great Britain and the United States concerning Canadian Boundary Waters clearly shows that Canada received full compensation for any damage which might result to her navigation interests by reason of the Chicago diversion. Canada was given the right to divert 36,000 cubic feet per second of water at Niagara Falls for power purposes, while the United States was only permitted under the treaty to divert 20,000 cubic feet per second. The 16,000 additional allowed Canada was because of the Chicago diversion, and in the negotiations for the treaty all of the persons carrying on such negotiations in arriving at the division of waters at Niagara Falls considered that the United States should be charged with the Chicago diversion in addition to the 20,000 c. f. s. diversion permitted for power purposes to the United States at Niagara Falls.

Part of the brief above mentioned has been set up in galley form. The completion of the brief is awaiting certain engineering investigations. It will be ready for delivery shortly when the negotiations on this matter can immediately proceed.

(2) The good faith of the Sanitary District in endeavoring to plan, install and operate artificial purification works supplementary to and in aid of the works constructed to withdraw water from Lake Michigan for dilution purposes (20,000 cubic feet per minute for each 100,000 of population, as required by state law) is clearly demonstrated by experiments made by the District to ascertain the best method of artificially purifying sewage, works constructed and under construction, and the acquirement of sites for such works. Erroneous statements have been made and expressed by persons opposed to the plans of the District, that the District contemplated and proposed to continuously divert from Lake Michigan the amount of water required by State law according to the population of the District without regard to the amount. The Sanitary District has never taken the position, and it does not now, that it had the right to withdraw more than the maximum flow of the rock section of the main channel of the District. The District has always assumed there would be such limitation of the withdrawal of water and that then it would be necessary to install and operate works to take care of the sewage that could not be disposed of by this limited flow. The District has also comprehended that works for the disposition of trade wastes and sewage in various localities where the dilution system could not effectually operate by reason of inability to deliver at such points the required amount of dilution water would have to be installed and operated to take care of local nuisances.

The District constructed and has now in operation at Morton Grove, Illinois, an Imhoff Tank, and is constructing, or is about to construct in connection with such tank a sprinkling filter for the disposition of the sewage of Morton Grove.

In the Desplaines River Valley, to eliminate nuisances in the Desplaines River and to take care of the sewage of the Towns of Riverside, Maywood, River Forest and others, the District is now constructing an Activated Sludge Plant, together with the necessary intercepting sewers for the collection of the sewage of those towns.

The Board of Trustees has authorized the condemnation of one hundred acres of land near the Calumet Sewage Pumping Station at 125th street and Michigan avenue, Chicago, on which there is to be constructed an artificial sewage disposal plant.

In the Stock Yards District, to take care of the trade wastes of Packingtown, the District has acquired a site for purification works of eight to fourteen acres.

At 39th street and Lake Michigan the South Park Improvement project contemplates the setting aside of sufficient land for the construction of purification works for the sewage collected at that point.

The Sanitary District has recently been carrying on experiments for the construction of small disposal plants at sewer outlets along the North Branch of the Chicago River, in order to eliminate the nuisanes now existing in the North Branch due to the inability to provide sufficient water from Lake Michigan to dilute the sewage flowing in that river.

At Summit, Illinois, the District owns over two hundred acres of land which may be available for such works.

The Sanitary District has for a number of years carried on extensive experiments in sewage purification. As you well know, the art of sewage purification has been for some time in a state of flux. Various methods have been presented and for a time approved, and afterwards cast aside and replaced by some other method which has received like treatment. Some of the best sanitary engineer talent in the United States has been provided by the District for these experiments, so that sanitary engineers throughout the United States frequently come to the Sanitary District to obtain information regarding the solution of sanitary problems under consideration by them.

While the Sanitary District constructed in 1907 a hydro-electric plant at Lockport, Illinois to develop the water power incidentally created by the operation of the Main Channel of the Sanitary District, and has operated such plant for the past twelve years, not one single drop of water has been taken by the Sanitary District from Lake Michigan for this water power. The mean twenty-four hour withdrawal has never at any time exceeded the state law requirement for dilution purposes.

(3) The Sanitary District is ready at any time to give you any data that it has with reference to the subject matter of this letter, to proceed at any time with conferences concerning the solution of the questions above mentioned and to co-operate with the United States, with a view to fixing the permanent maximum amount of diversion from Lake Michigan and also specifying the progress of installation of artificial purification works to supplement the diversion works, so that when the sewage of the District cannot any longer be taken care of by the maximum permanent flow fixed, artificial sewage purification works will be provided for the sewage of the increased population.

Of course, any statements made in connection with these negotiations are understood to be without prejudice to litigation pending between the Sanitary District and the United States.

Very respectfully yours,
WALLACE G. CLARK,
GEORGE W. PAULLIN,
PATRICK J. CARR,
WM. J. HEALY,
Special Committee.

FROM: W. V. JUDSON, COLONEL, CORPS OF ENGINEERS,

TO: MR. EDMUND D. ADCOCK, SPECIAL ATTORNEY, SANITARY DISTRICT OF CHICAGO, KARPEN BUILDING, CHICAGO, ILLINOIS.

DEAR SIR—I enclose herewith a memorandum which is in a way self-explanatory. It itemizes the three principal respects in which it is desirable there should be co-operation between certain local bodies and the United States and the adoption of harmonious policies.

I am sending a copy of this memorandum to a number of gentlemen of Chicago, requesting each to advise me as to whether anything can be done at this time through proper conferences or otherwise to advance the cause of co-operation and harmonious action as proposed.

Thanking you in advance for any suggestions you may be kind enough to make in this connection, I am,

Yours very respectfully,
(Signed) W. V. JUDSON,
Colonel, Corps of Engineers.

MEMORANDUM.

In several important matters involving the care and protection of navigable waters it is important that the city of Chicago and other local agencies come to a proper understanding with the United States. In the following numbered paragraphs an effort is made to describe these matters as to which it is advisable that mutual understanding be sought and harmonious action taken.

1. How long will it be advisable for the United States to require drawbridges on the Chicago River and its branches to facilitate navigation by lake vessels? Such navigation is rapidly declining. The cost of constructing, maintaining and operating draw bridges, and, through their operation, of delaying land traffic is already enormous and, of course, increasing. It is necessary to estimate the situation in this matter in order that economic loss incident to a change of policy with reference to the river, if and when such change of policy may occur, may be kept at a minimum.

In its fore shore along Lake Michigan Chicago possesses a marvelous asset. Nearly a hundred square miles, now submerged by Lake Michigan off the water front of Chicago, lie within less than forty-two feet of water. If this area be properly allocated to

park, harbor and possibly other purposes, many interests can be served exceedingly well to the great advantage, at once, of the locality and of the United States, considering the latter as the guardian of interstate navigation. To understand what a wealth this fore shore confers upon Chicago, it is only necessary to consider what would be the situation if the lake front of Chicago were like the lake front of Michigan City, where the 42 foot contour is only one-fifth as far out in the lake as it is here. Water deeper than 42 feet is practically useless for the creation of land in any considerable quantities. It will be possible for the United States to be very much more liberal at this time in authorizing the creation of park lands in this fore shore area if the state agrees that the park lands within certain areas may be caused to revert to harbor purposes upon the proper demand of the United States. It is necessary to reserve certain lands for harbor purposes at this time, and to have the possibility of changing certain lands, temporarily allocated to other purposes, to harbor purposes if the demand arises in the future. No one can say today how large an area will be required for harbor purposes in the distant future, when deep waterways may connect the Great Lakes with the sea and permit Chicago to become a great seaport. It is also obvious that if Chicago River ceases to be used by lake vessels, a considerable provision must be made before this happens to accommodate lake vessels in greater numbers than now on the lake front.

3. Chicago now disposes of its sewage by conveying it into the Illinois River, using about 8,000 cubic feet per second of Lake Michigan water. Unless steps are now taken to begin the purification of Chicago District sewage in accordance with a reasonable and progressive plan it will be necessary for the health of Chicago continually to increase the draft of water from Lake Michigan on the one hand, and continually to dump the sewage of Chicago on the people of the Illinois and Mississippi valleys. The United States will doubtless meet this locality in a fair and frank way, but at this time it is necessary to have assurance that the purification of sewage will be begun in the very near future and continued at a reasonable rate so that twenty years from now it may not seem necessary for the protection of the health of Chicago, to withdraw from the lake, to the great detriment of other interests, quantities of water which everyone concerned would be compelled to call excessive. There will always be a tendency to increase the flow from Lake Michigan by reason of the advantages that would thus result to water powers already existing or to be developed between Lockport and Starved Rock. In any event, if the Drainage District be permitted, in accordance with any new policy that may be adopted, to withdraw either temporarily or for all time, more than 4,166 cubic feet per second as now authorized by the War Department, in my opinion the Drainage District should be required to advance to the United States sufficient funds to build, maintain and operate works for the regulation of the levels of Lake Michigan, Huron, Erie and Ontario.

THE SANITARY DISTRICT OF CHICAGO.

PRELIMINARY STATEMENT.

July, 1918.

GEORGE M. WISNER,
Chief Engineer.

CHICAGO, July 15, 1918.

Major General W. M. Black,
Chief of Engineers, U. S. Army,
Washington D. C.

1. *Prefatory*—This statement is made pursuant to conference held at your office between you and members of your department and myself and others representing The Sanitary District of Chicago, and suggestion previously made to me by Brigadier General Charles Keller. It concerns the diversion of water from Lake Michigan into the Chicago Drainage Canal and is made for the purpose of placing before the Engineer Department certain salient facts and considerations preliminary to the inspection of our works by certain officers of the Corps assigned by you to study and report upon this matter, and also to printed brief of the matter more fully discussing the questions involved to be submitted after the inspection is made.

2. *Purpose*—The Drainage Canal was designed to dispose of the sewage and drainage of the City of Chicago and contiguous areas by the dilution method.

3. *Water Supply*—The reversal of flow in the Chicago River removed the principal menace of a sewage contaminated water supply for the population tributary to the Sanitary District.

4. *Method*—At the time of the inception of the project (1889) the method employed appeared to eminent Sanitary and Hydraulic Engineers the best solution of Chicago's water-supply and sewage-disposal problems.

5. *River Pollution*—At the time of the opening (1900) of the greater canal the Illinois River with a low water summer flow of less than 500 cubic seconds feet had been receiving since 1848 some of the sewage of Chicago, pumped over the Divide prior to 1872 and flowing by gravity since that time; it drained manured farm lands, and received the sewage and industrial wastes of towns on its banks. This Illinois River was not an entirely pure stream. The population of the Illinois River Valley largely use the artesian or deep-well sources for municipal water supply.

6. *Canal Capacity*—While the Engineers in designing the canal intended to have a capacity in the rock cut of the minimum provided by State law —10,000 cubic seconds feet,—the rock cut when actually constructed proved to have a capacity of 14,000 cubic seconds feet. The works as now constructed have a capacity for a diversion to the Main Channel and its adjuncts at Lockport of 12,000 cubic seconds feet. It was generally understood during the period of construction of the Main Channel, and subsequently, that the contemplated diversion was 10,000 cubic seconds feet, and for the purpose of this discussion that will be considered as the designed capacity.

7. *Internal Waterway*—In addition to its uses for sanitary purposes the Chicago Drainage Canal was designed as a navigable channel serving to connect Lake Michigan with the Mississippi River through the Desplaines and Illinois Rivers. This link in a system of internal waterways financed by the State of Illinois must not be lost sight of in judging the whole project. While internal waterways may be yet somewhat in the future, the years to come will certainly fully utilize them. Plans for the utilization of the Illinois River may prefer a development by slack-water pools, but the cost of reasonably deep-water navigation will be lessened with more ample flow. The Chicago Drainage Canal is really an enlarged Illinois and Michigan Canal, and has taken over its functions. This predecessor of the Drainage Canal was authorized by Congress in Acts of 1822 and 1827.

8. *Water Power*—Incidentally the diversion from Lake Michigan permitted the development of a water power generating about two and eight tenths electrical horsepower for each cubic foot of water per second passing through the turbines. About 85 per cent of the electric power is used for municipal lighting and for pumping water and sewage. Other water powers on the Desplaines and Illinois Rivers are in operation, or in contemplation, amounting to about six horse power per cubic foot of water per second.

9. *Damage to Lakes Not Appreciated*—In the years during the construction of the canal it was not credited that the contemplated diversion from Lake Michigan would in any tangible measure lower lake levels, so as to practically lessen the carrying capacity of lake vessels. Up to the time of the measurements of the Niagara River, by the Deep Waterways Commission (1898), no reliable engineering conclusion, based on adequate observations existed. The vessels of 1889 were relatively small, with fourteen-foot drafts, and the lake commerce relatively inconsiderable. Water power at Niagara was in its infancy; work on the construction of the Niagara Falls Power Company's plant began in the Fall of 1890. With great, tangible sanitary benefits to the well-being of the large population of Chicago and suburban towns, the possibility of real hurtful effects to navigation on the Great Lakes appeared insubstantial in comparison.

10. *Compensation*—Should the lake levels be substantially lowered, the ability to restore them was axiomatic. The report of the Board of Engineers on Waterway from Lockport to Mississippi, points out ways for this restoration; the report of the Board of Engineers on Deep Waterways (1900) presented a plan for raising water surface levels from Buffalo to Chicago and Sault Ste. Marie, by regulating works at the head of the Niagara River; Lake Superior was raised six inches by the building of

the piers of the International Bridge and the Chandler Dam; Lake Ontario was raised six inches by the building of the Gut Dam.

11. Current—What appeared to be a real obstruction to navigation existed in the current created in the Chicago River. This was largely obviated by deepening and widening the river prism; and the Calumet Sag branch canal, now practically complete, is designed to relieve by 2000 cubic seconds feet the Chicago River flow. This current in the Chicago River was the real reason for the first restrictions in diversion by the Secretary of War, not the menace to lake levels. The first permit, for intermediate volume, was eventually cut down in 1901 to the present permit of 4167 cubic feet per second by reason of this current. Since that time the betterment in the canalized river section has permitted a diversion of from 7000 to 8000 cubic seconds feet without substantial injury to the facility of navigation. The cost of the prism betterment in the past seventeen years has been upward of thirteen million dollars. This navigation betterment has all been done at the expense of the Sanitary District, under the authority of the Chief of Engineers and the Secretary of War; and with the principal object of making practicable greater diversion.

12. *The Dilemma*—By the year 1908 the diversion in the Drainage Canal was 6596 cubic seconds feet, or 2429 cubic seconds feet in excess of the diversion authorized by the Secretary of War. The District was in the perplexing position of requiring a dilution of 3⅓ cubic seconds feet for each 1000 of population of the District, while the Secretary of War was convinced that he had reached the limit of his discretionary power in permitting diversion, and that any further diversion should have the sanction of Congress.

13. *Division of Waters*—Meanwhile a very significant event had taken place. This was the Joint Report of the International Waterways Commission of May 3, 1906, on the partition of waters tributary to the Niagara River, for the Preservation of the Scenic Grandeur of Niagara Falls. This report recommended limitations as follows:

Canada—in Niagara River	36,000 c. s. f.	
United States—in Niagara River	18,500	
at Chicago	10,000	28,500 c. s. f.

14. *Report on Drainage Canal*—A second significant event was the Joint Report of the International Waterways Commission of January 4, 1907. After careful examination of the physical phases, and the equities involved, the International Commission recommended in substance that Chicago be allowed to divert 10,000 cubic seconds feet.

15. *Treaty*—The third significant event was the Treaty of 1909 with Great Britain, which partitions the waters of Niagara Falls as follows:

Canada	36,000 c. s. f.
United States	20,000 c. s. f.

What appears a manifest unfairness to the United States in the Canadian excess of 16,000 seconds feet, vanishes in part when the Treaty is understood to apportion to Chicago a potentially existing diversion of 10,000 cubic seconds feet, as recommended by the Joint Report of the International Waterways Commission above mentioned.

16. *Interpretation*—The Sanitary District is prepared to present additional conclusive evidence that the Treaty with Great Britain contemplated for Chicago a diversion of 10,000 cubic seconds feet; and that Canada in this partition at Niagara is reimbursed for a diversion of that amount at Chicago. Canada, for a diversion up to 10,000 cubic seconds feet, can have no shadow of a claim for any damages to navigation or water power. The Treaty followed the quantity recommendations for Niagara Falls of the International Waterways Commission, except that it made the allowance for power on the American side 20,000 cubic seconds feet instead of 18,500; and this additional 1500 feet for the American side was not intended to disturb Chicago's apportionment of 10,000 cubic seconds feet.

17. *Treaty Forecloses Canada*—It is not intended to infer here that the Treaty authorizes Chicago to divert 10,000 cubic seconds feet without a permit from the Secretary of War, or the sanction of the Congress of the United States,—provided the police power of the State of Illinois is insufficient,—but it is believed that the acquiescence of Canada is complete and ultimate. She received at Niagara

her *quid pro quo* for the diversion at Chicago of 10,000 cubic seconds feet.

18. *Friendly Suit*—Reverting now to the year 1908, when the Sanitary District was between the devil and the deep sea, must violate the State law if it diverted less, or decline to accept a Federal invasion of State rights, and divert more; it was agreed that the United States, through the Department of Justice, should institute a friendly suit to define the rights of the State of Illinois, and the reach of the Federal Government. The original case was to enjoin the building of the Calumet-Sag branch of the Drainage Canal. Later, by mutual agreement, the litigation included diversions in excess of the formal permit, wherever taken, in order to settle all controversies.

19. *Delay*—The case of the United States vs. the Sanitary District, involved the most elaborate hydraulic and sanitary testimony. The disaster to Chicago would be so serious should the decision be adverse, that it is not extraordinary that it was the year 1915 before all evidence was finally in, and the case submitted to Judge Landis. A decision in the case has not yet been handed down. The District will welcome a decision when it is practicable to reach it. But after that decision it is probable that the case must be reviewed by the Supreme Court of the United States, and this means additional uncertainty and delay.

20. *Congressional Sanction Urged*—The present perplexity of the Engineering Department of the District in providing for the future is obvious. To avoid further delay the District finally decided to go to Congress for sanctions of it diversion. Secretaries of War Taft and Stimson had indicated this as necessary, and the Attorneys for the United States had reiterated the necessity of this course. The desirability of the Sanitary District going to Congress was again emphasized by the Report of the Board of Engineers for Rivers and Harbors in connection with the Final Report on Waterway from Lockport, Ill., to the Mouth of the Illinois River. (House Document No. 762, 63d Congress, 2nd Session.) A portion of paragraph 15, page 8, is as follows:

"Further, the board believes that the total volume of water to be diverted from the natural discharge channels of the Lakes should be definitely fixed by Congress; that a project, with estimate of cost; for works necessary to compensate for such diversion should be prepared to the satisfaction of the Chief of Engineers and the Secretary of War; that before any diversion is made beyond that at present existing, the State of Illinois shall transfer to the Secretary of War funds necessary for such works as given by the approved estimate of cost; that the works shall be built by the United States with the funds so provided; and that the control and maintenance of such works shall be in and at the cost of the United States."

21. *Funds Appropriated*—A bill has been introduced in Congress asking for a diversion of fixed amount. In this Bill it is conditioned that the Sanitary District appropriate the funds necessary for navigable restorations or betterments. An appropriation of $600,000 was made on January 10, 1918, by the Board of Trustees to be placed in the hands of the Secretary of War towards the accomplishment of the compensation desirable. It is suggested that these funds be used to construct the regulating works in the St. Lawrence River (with the acquiescence of the United States and Canada) to redistribute the out-flow of Lake Ontario so as to benefit both navigation and water power in that river, and navigation on the Lake; and to construct regulating works at the head of the Niagara River to raise the levels of Lakes Erie, St. Clair, Michigan and Huron.

22. *Engineers*—The District has retained as Consulting Engineer, Mr. Francis C. Shenehon, of Minneapolis, well known to the Engineering Department, to investigate and report on the best methods of accomplishing this regulation; and to work in conjunction with Mr. Gardner S. Williams, long our Consulting Hydraulic Engineer, under my direction

23. *Montreal*—Conferences have been held with officials of the Harbor Board on Montreal, and it is through their suggestion that the redistribution of the St. Lawrence River flow is under investigation. A special

report on this proposed regulation will in the near future be completed.

24. *Purification*—Any unwholesomeness of the Illinois River can be bettered in two ways; first, by a higher rate of dilution; second, by some purification of the sewage and wastes before entering the canal. The District has spent upwards of $350,000 in the past few years in the investigation of methods of purification. Some sewage betterment already exists. The District purposes to put into operation the activated sludge treatment of the stock yards wastes. The estimated cost of this purification plant is $4,000,000, and the annual operating expense $750,000.

25. *Art of Sewage Disposal in Transition Stage*—One of the great difficulties in dealing with sewage purification and disposal is the lack of finality in the methods available. The art appears to be in a state of flux, with little demonstrated as practical and economical. The old dilution method, relying on the demonstrated ability of a running stream to digest a certain percentage of organic matter, is still in predominant use as an accepted method; but some predigestion is desirable, and will be used by the Sanitary District in increasing measure.

26. *Supplemental Sewage Treatment*—Sound policy on the part of the District indicates the desirability of keeping the Illinois River inoffensive. The degree of dilution fixed by the State law was designed to satisfy the river valley population. Ultimately when the needs of the population of the District exceeds the limit fixed for diversion, excess sewage will be treated in some supplemental way.

27. *Illinois as an Outlaw*—The State of Illinois—of which the Sanitary District is an instrumentality—has been put in the wrong, and at times apparently regarded as a culprit by the United States—of which it is not an inconspicuous part—because it acted with boundless confidence in the propriety of this great project and omitted the securing of early formal Federal assent to its proposed enlarged diversion from Lake Michigan. Having in mind that the diversion of 1900 was different in quantity, but not in principle from the diversions beginning in the pumping of 1848, and the gravity diversion of 1872 continuing and increasing up to 1900, it is not strange that the need of formal assent was not fully appreciated.

28. *Other Inadvertent Trespassers*—Other diversions of the waters of the Great Lakes affecting navigable depths had existed under State authorization or charter. At Niagara Falls, the two American Power Companies had built great plants costing upwards of twenty million dollars, and contemplating a diversion of 18,000 cubic seconds feet, with an estimated lowering of the interstate and International navigable waters of the Niagara River of nearly six inches. Diversions of approximately 13,000 cubic seconds feet were in operation on the American side, before Secretary of War Taft issued the first permits in 1906. These diversions were made by private companies as commercial enterprises, and profitable investments.

In citing these precedents for unauthorized diversions at Niagara, of the navigable waters of the United States, no implication is intended that these diversions are not wholesome and beneficial. But these companies spent twenty million dollars without appreciating the need of permits, other than State permits; just as Chicago for sanitary and navigational purposes spent her many millions. The Sanitary District asked for a permit from the Federal Government six years before the companies at Niagara Falls asked for permits; and these private power companies are properly regarded as desirable citizens, not culprits.

29. *Extenuation for Non-observance of Limitations*—The parallel ceases, however, after permits were issued at Niagara Falls, and at Chicago. The power companies observed the limitations of the permits, while Chicago for many years has exceeded her permitted diversion. In partial extenuation of this it may be said that the permits at Niagara gave the two power companies substantially all the water needed (15,100 cubic feet) to operate their existing plants, and to fulfill their existing contractual obligations. At Chicago, on the other hand, the permit is for but 63 per cent of the actual existing sanitary needs of 1908, and but 52 per cent of the actual present existing sanitary needs. This permit allows only 41.67 per cent of the designed capacity of the canal, and but 34.7 per cent of the actual

constructed capacity. The diversion at Chicago has never exceeded the obligation created by sanitary necessity and by the Illinois State law, and up to 1909—the date of the Treaty—was but 70 per cent of the designed capacity of the canal. It is easier to be a good citizen when you have substantially all you urgently need; and the Sanitary District and the State of Illinois are confident of the same indulgent magnanimity ultimately on the part of the Federal Government as these great power enterprises at Niagara have received.

Moreover, the District has acted always on the theory that the refusal of the Secretary of War to extend the permit was not a prohibition, but a statement of lack of jurisdiction; that the authority must come from the Courts or from Congress—and this meant only delay in making the diversion federally legitimate.

30. *Acquiescence*—Further extenuation of the excess diversion at Chicago enters in the fact that the canalization was entered into and effected with the full knowledge, acquiescence and authority of the Federal Government.

31. *Damages and Remedies*—In the final analysis the diversion at Chicago has but three hurtful effects.

First—Lowering the levels of the Great Lakes and the out-flow rivers.

Second—Diminishing by less than 5 per cent the average volume of flow in the Niagara and St. Lawrence Rivers, and hence lessening by this percentage the total water power content.

Third—A diminution of the flow on the cataract at Niagara.

The Sanitary District has appropriated a part of the funds to substantially undo all losses in lake levels, and in part to better natural condition. The lakes constitute a slack-water system of navigation and do not depend entirely on volume of flow any more than the Illinois River navigation does. Navigation in the Detroit River and the lower St. Clair River will be bettered by the regulation to be proposed. The navigable capacity of the St. Lawrence River will be improved by a better distribution of the out-flow of Lake Ontario. Water powers on the Niagara and St. Lawrence Rivers will be benefited by fuller utilization of Lakes Erie and Ontario as storage reservoirs. The flow over the cataract at Niagara will be augmented over certain hours of the day to the extent of the diversion at Chicago by a better distribution of the out-flow of Lake Erie.

32. *Diversion as Mean Value*—It is desirable to fix the limit of diversion in the Drainage Canal, as a monthly mean, not a rigid quantity never to be even momentarily exceeded. Some variation of flow is desirable by reason of fluctuating volumes of sewage, and in order to conserve the water power possibilities of the stream. The limit of variation of flow should be controlled by navigational requirements in the Chicago River. The effect on the lakes and out-flow rivers is understood not dependent on hourly or daily variations of flow at Chicago, but on the monthly or annual mean diversion.

33. *U. S. Control*—Federal supervision and control of the out-flow through the Drainage Canal will be welcomed by the Sanitary District.

34. *In Perspective*—It is desired to quote paragraph 19 of the Joint Report of January 4, 1907, of the International Waterways Commission, which is as follows:

> "In the expenditure of $40,000,000 for the drainage canal the people of Chicago, with its population of 2,000,000, incurred a burden equivalent to that due to an expenditure of $1,600,000,000 by the United States, with its population of 80,000,000—that is, enough to build eight or more Panama Canals. It was a very serious effort and has commanded the admiration and sympathy of all observers. The diversion of 10,000 cubic feet per second from Lake Michigan affects other interests adversely, but these interests have withheld their opposition, seeming to believe that some such amount was necessary, and apparently willing to contribute their share to protect the lives and health of the people of a great city. The plans calling for that amount have been under public discussion for some years. Although withholding formal approval, the Federal authorities have taken no steps to prevent their execution. Congress has called for a plan and estimates for an improvement of the waterways connecting with it, the scope of which is fixed by that

amount. There appears to be a tacit general agreement that Chicago needs or will need about 10,000 cubic feet of water per second for sanitary purposes, and that the city should have it without further question."

35. *Expectations*—Taking into consideration all the facts:—the early Congressional sanction for some diversion, involving the principle at least; the knowledge of the project purpose, and the approval of channel improvements by Federal Officers; the recommendations of the International Waterways Report; the Treaty with Great Britain; the pendency of the friendly litigation to determine State rights,—considering all these things, has there ever been a time when the Sanitary District could reasonably dismiss expectation of a diversion of at least 10,000 cubic seconds feet? Has it ever been face to face with the desperate need of counting as loss the many millions spent to make its canal ample; and of spending many millions more to retrieve in some other way its supposed mistake?

36. *Equity*—It is submitted whether good faith and magnanimity on the part of the Federal Government do not assure to the State of Illinois the authority to divert 10,000 cubic seconds feet of water at Chicago. The present requirement under the Illinois State law is about 8700 cubic seconds feet By 1922 to 1925 the legal dilution will require a flow of 10,000 cubic seconds feet. It is not purposed to increase the use of water any faster than the legal rate of dilution requires.

37. *Diversion of 12,000 C. S. F.*—The Bill introduced in Congress limits the diversion at Chicago to 12,000 cubic seconds feet. This diversion, larger than the amount considered in the negotiations leading up to the Treaty, is wanted by the District because its works have that capacity. In the use of this additional 2000 cubic seconds feet, and with a view of working out a solution and compromise recognizing the needs of all concerned. the District approaches the Federal Government in the attitude of requesting something for which it is willing to pay,—an economic benefit to the two and one-half million people it represents, for which it is ready to render a corresponding economic benefit to the Great Lakes and their outflow rivers—benefits to both Canada and the United States.

38. *Admissions*—This statement to you has in part waived controversial questions, or expressed facts as viewed by the United States, for the purpose of amicable discussion. It is understood that nothing herein is to be construed as admissions to be used against the District in the litigation still pending.

39. *Inspection of Works*—I believe that a personal examination of the works by officers assigned to study and report upon this matter is absolutely essential to a fair and just solution of the problem. It is my understanding that at the conference between us held at your office on June 29th you assigned to this matter Colonel Newcomer and Major Mehaffey, who it was understood would at their early convenience come to Chicago and personally inspect the works and plans of the District and at first hand observe as far as possible the conditions and difficulties to be overcome. Upon advice from them as to the time they will be here I will be prepared to submit all facts and give them every opportunity to make a complete and expeditious inspection of the works and plans of the District.

Very respectfully,
G. M. WISNER,
Chief Engineer.

Appended hereto:

1—Letter from Secretary of State Robert Lansing to Congressman Henry T. Rainey of Illinois, enclosing certain papers before the Secretary of State when Treaty with United States and Canada was negotiated.

2—Maps showing works and territorial limits of the Sanitary District.

April 23, 1918.

Honorable Henry R. Rainey, House of Representatives.

MY DEAR MR. RAINEY—Referring to your letter of February 15th, and to your calls at the Department in respect to obtaining from the archives certain documents bearing on the negotiation of the Boundary Waters Treaty between the United States and Great Britain of 1909, I beg to say that upon considering the papers selected by Mr. Adcock of Chicago, it appears that there is no objection to furnishing you with a copy of the

memorandum from the State Department to the Committee of Foreign Relations for their consideration in connection with the treaty (a copy of which may doubtless also be obtained from that Committee), or with a copy of the memorandum of extracts from the report of the International Waterways Commission; but that the other two papers selected by Mr. Adcock appear not to have been used directly in the negotiations resulting in the treaty of 1909, and were never submitted to the Canadian Government.

For these reasons which I am sure you will appreciate it seems preferable not to give out the papers mentioned. In discussing the matter with the Honorable Chandler P. Anderson, who represented the State Department in the negotiations with the Canadian officials which resulted in the treaty of 1909, he pointed out that it might be of more assistance to you to have a short statement from him as to what was brought out during the negotiations in respect to the diversion of the water for the Chicago Drainage Canal than to have the documents selected by Mr. Adcock, which do not clearly bring out the attitude of the negotiators on this point. If you desire to have such a memorandum by Mr. Anderson I would be pleased to ask him to prepare it for use.

Very truly yours,

ROBERT LANSING,
Sec'y of State.

Enclosures: Copies of first two papers mentioned.

Extracts from reports of the International Waterways Commission, including Joint Reports of the Commission and Separate reports of the American Section, containing recommendations with respect to the regulation by treaty of the use of boundary waters.

Extract from the report of the American Commissioners, date March 19, 1906:

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32. If the falls are to be preserved it must be by mutual agreement between the two countries. As a step in that direction we recommend that legislation be enacted which shall contain the following provisions, viz:

(a) The Secretary of War to be authorized to grant permits for the diversion of 28,500 cubic feet per second, and no more from the waters naturally tributary to Niagara Falls, distributed as follows:

	Cubic feet.
Niagara Falls Hydraulic Power and Manufacturing Company	9,500
Niagara Falls Power Company	8,600
Erie Canal or its tenants (in addition to lock service)	400
Chicago Drainage Canal	10,000

(b) All other diversion of water which is naturally tributary to Niagara Falls to be prohibited, except such as may be required for domestic use or for the service of locks in navigation canals.

(c) Suitable penalties for violation of the law to be prescribed.

(d) The foregoing prohibition to remain in force two years, and then to become the permanent law of the land, if in the meantime, the Canadian government shall have enacted legislation prohibiting the diversion of water which is naturally tributary to Niagara Falls, in excess of 36,000 cubic feet per second, not including the amount required for domestic use or for the service of locks in navigation canal. It is assumed, however, that an understanding upon this subject would be reached by treaty.

33. The object of such legislation would be to put a stop to the further depletion of the falls, and at the same time inflict the least possible injury upon the important interests now dependent upon this water power The amount to be diverted on the Canadian side, has been fixed with a view to allowing to the companies on that side the amount for which they now have works under construction, which are:

	Cubic feet.
Canadian Niagara Power Company	9,500
Ontario Power Company	12,000
Electrical Development Company	11,200
Niagara Falls Park Railway Company	1,500
Welland Canal or its tenants (in addition to lock service)	18,000

34. One of the effects on such legislation would be to give to

Canada the advantage of diverting 7,500 cubic feet per second more than is diverted in the United States. The advantage is more apparent than real, since the power generated on the Canadian side will to a large extent be transmitted to and used in the United States. In the negotiation of a treaty, however, the point should be considered.

Note: The recommendations of this report were not very closely followed by Congress, as will appear from the Act approved June 29, 1906, for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls and for other purposes, the first two sections of which Act are as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the diversion of water from Niagara River or its tributaries, in the State of New York, is hereby prohibited, except with the consent of the Secretary of War as hereinafter authorized in section two of this Act: Provided, That this prohibition shall not be interpreted as forbidding the diversion of the waters of the Great Lakes or of Niagara River for sanitary or domestic purposes, or for navigation, the amount of which may be fixed from time to time by the Congress of the United States or by the Secretary of War of the United States under its direction

Sec. 2. That the Secretary of War is hereby authorized to grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creating of power to individual companies, or corporations, which are now actually producing power from the waters of said river, of its tributaries, in the State of New York, or from the Erie Canal; also permits for the transmission of power from the Dominion of Canada into the United States, to companies legally authorized therefor, both for diversion and transmission, as hereinafter stated, but permits for diversion shall be issued only to the individuals, companies or corporations as aforesaid, and only to the amount now actually in use or contracted to be used in factories the buildings for which are now in process of construction, not exceeding to any one individual, company or corporation as aforesaid a maximum amount of eight thousand six hundred cubic feet per second, and not exceeding to all individuals, companies or corporation as aforesaid an aggregate amount of fifteen thousand six hundred cubic feet per second; but no revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversion of additional amounts of water from the said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, fifteen thousand, six hundred cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries, in the State of New York; Provided, That the said Secretary, subject to the provisions of section five of this Act, under the limitations relating to time above set forth is hereby authorized to grant revocable permits, from time to time, to such individuals companies, or corporations, or their assigns, for the diversion of additional amounts of water from the said river or its tributaries to such amount, if any, as, in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls; and that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States, shall be one hundred and sixty thousand horsepower; provided further, That the said Secretary, subject to the provisions of section five of this Act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said one hundred and sixty thousand horsepower and the amount generated and used in Canada exceed three hundred and

fifty thousand horsepower: Provided always, That the provisions herein permitting diversions and fixing the aggregate horsepower herein permitted to be transmitted into the United States, as aforesaid, are intended as a limitation on the authority of the Secretary of War, and shall in nowise be construed as a direction to said Secretary to issue permits and the Secretary of War shall make regulations preventing or limiting the diversion of water and the admission of electrical power as herein stated; and the permits for the transmission of electrical power issued by the Secretary of War may specify the persons, companies, or corporations by whom the same shall be transmitted, and the persons, companies, or corporations to whom the same shall be delivered.

This Act also provides as follows:

Sec. 4. That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing, by suitable treaty with said Government for such regulation and control of the water of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river.

Sec. 5. That the provisions of this Act shall remain in force for three years from and after date of its passage; at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked, and the Secretary is hereby authorized to revoke any or all permits granted by him by authority of this Act, and nothing herein contained shall be held to confirm, establish, or confer any right heretofore claimed or exercised in the diversion of water or the transmission of power.

Extract from the joint report of the Canadian and American members of the Commission, dated May 3, 1906:

3. The Commission therefore recommend that such diversions, exclusive of water required for domestic use or the service of locks in navigation canals, be limited on the Canadian side to 36,000 cubic feet per second, and in addition thereto a diversion for sanitary purposes not to exceed 10,000 cubic feet per second be authorized for the Chicago Drainage Canal, and that a treaty or legislation be had limiting these diversions to the quantities mentioned.

The effect of the diversion of water by the Chicago Dainage Canal upon the general navigation interest of the Great Lakes system will be considered in a separate report.

The Canadian section, while assenting to the above conclusions, did so upon the understanding that in connection therewith should be expressed their view that any treaty or arrangement as to the preservation of Niagara Falls should be limited to the term of twenty-five years, and should also establish the principles applicable to all diversions or uses of water adjacent to the international boundary and of all streams which flow across the boundary.

The following principles are suggested:

1. In all navigable waters the use for navigation purpose is the primary and paramount right. The Great Lakes system on the boundary between the United States and Canada, and finding its outlet by the St. Lawrence to the sea, should be maintained in its integrity.

2. Permanent or complete diversions of navigable waters or their tributary streams should only be permitted for domestic purposes and for the use of locks in navigation canals.

3. Diversions can be permitted of a temporary character where the water is taken and returned again, when such diversions do not interfere in any way with the interests of navigation. In such cases each country is to have a right to diversion in equal quantities.

4. No obstruction or diversion shall be permitted in or upon any navigable water crossing the boundary, or in or from streams tributary thereto, which would injuriously affect navigation in either country.

5. Each country shall have the right of diversion for irrigation or extraordinary purposes in equal quantities of the waters of non-navigable streams crossing the international boundary.

6. A permanent joint commission can deal much more satisfactorily with the settlement of all disputes arising as to the application of these principles, and should be appointed.

Extract from the recommendations at the end of the joint report of the commission dated January 4, 1907, on the Chicago Drainage Canal:

RECOMMENDATIONS.

41. The waters of Lake Michigan in the United States, the waters of Georgian Bay in Canada, and the waters of Lake Superior partly in the United States and partly in Canada all form sources of supply of the Great Lake system, finding their way by the St. Lawrence to the sea. All are interdependent and there can be no diversion from any of them without injury to the whole system. By Article XXVI it is provided that "navigation of the river St. Lawrence, ascending and descending from the forty-fifth parallel of north latitude, where it ceases to form the boundary between the two countries, from, to, and into the sea, shall forever remain free and open for the purposes of commerce to the citizens of the United States, subject to any laws and regulations of Great Britain, or of the Dominion of Canada, not inconsistent with such privileges of free navigation." It is desirable that in any treaty arrangement the waters of Lake Michigan, Georgian Bay, and all other waters forming part of the Great Lake system should be declared to be "forever free and open for the purpose of commerce" to the citizens of the United States and the subjects of His Britannic Majesty, subject to any laws and regulations of either country not inconsistent with such privilege of free navigation.

42. The preservation of the levels of the Great Lakes is imperative. The interest of navigation in these waters is paramount, subject only to the right of use for domestic purposes, in which term is included necessary sanitary purposes. In our report of November 15, 1906, upon the application of the Minnesota Canal and Power Company to divert certain waters in Minnesota, we recommend among other things—

> that any treaty which may be entered into should define the uses to which international waters may be put by either country without the necessity of adjustment in each instance, and would respectfully suggest that such uses should be declared to be (a) uses for necessary domestic and sanitary purposes; (b) service of locks for navigation purposes; (c) the right to navigate.

It is our opinion that so far as international action is concerned a treaty provision of that kind is all that is required in this case. We accordingly renew our recommendation of November 15, 1906, just quoted.

43. A careful consideration of all the circumstances leads us to the conclusion that the diversion of 10,000 cubic feet per second through the Chicago River, will, with proper treatment of the sewage from areas now sparsely occupied, provide for all the population which will ever be tributary to that river, and that the amount named will therefore suffice for the sanitary purposes of the city for all time. Incidentally it will provide for the largest navigable waterway from Lake Michigan to the Mississippi River which has been considered by Congress.

We therefore recommend that the Government of the United States prohibit the diversion of more than 10,000 cubic feet per second for the Chicago Drainage Canal.

Extract from the report of the American Members of the Commission, dated September 9, 1907:

> The American members of the International Waterways Commission have the honor to return herewith the letter dated July 25, 1907, addressed to yourself by the honorable Secretary of State, inclosing a letter dated June 5, 1907, which he had received from the president of the Niagara Falls Hydraulic Power and Manufacturing Company, which letter, with its inclosures, was referred to us for report.
>
> The Niagara Falls Hydraulic Power and Manufacturing Company represents that as the riparian owner it has the right to divert from the Niagara River for the development of power, a right which it has been exercising for many years; that in the year 1896 this right was specifically recognized, declared, and confirmed by the state of New York, but

the quantity of water to be diverted was at the same time restricted to the amount which could be drawn through a canal 100 feet wide, flowing with a depth of 14 feet, an amount computed to be 9,500 cubic feet per second under the plans adopted for the works; that its works have been planned, and their construction nearly completed, with a view to the use of this full amount costing over $5,000,000; that under recent legislation of Congress it is for the present restricted to the diversion of 6,500 cubic feet per second, which restriction, if made permanent, will subject it to heavy pecuniary loss; and that it is commonly understood that the United States and Great Britain are negotiating, or about to negotiate, a treaty affecting, among other things, the diversion of water from the Niagara River for the development of power. The company asks that its right to divert water to the extent of 9,500 cubic feet per second be protected and secured to it by a suitable provision in any treaty which may be made.

The situation is fairly stated by the company, and the request seems to us reasonable. It is consistent with the recommendations contained in our report of March 19, 1906, which reads as follows, viz.: (The recommendations will be found in the extract from this report on pages 1 and 2 of this memorandum.)

Those recommendations were not adopted by Congress without qualification. In the act approved June 29, 1906, the quantity of water authorized to be diverted on the American side at this time is less than that recommended, and it is only under certain contingencies that additional amounts may be diverted hereafter. The act is a temporary measure designed to apply an immediate remedy to evils of which the final remedy must be found in a treaty. Congress did not finally deprive itself, or even the Executive under certain contingencies, of authority to increase the amount. Whether the power to authorize the diversion of 9,500 cubic feet per second by the Niagara Falls Hydraulic Power and Manufacturing Company is ever to be exercised or not, it would seem wise for the United States to retain the power in making the agreements with Great Britain.

The American members are of opinion that the enunciation of principles to govern the making of a general treaty is not within the scope of their functions nor over the jurisdiction of the American members is restricted to the Great Lakes system.

The following matter involving international interests, directly or indirectly, have been under consideration by the Commission or the American members of it.

---

(1) Richelieu River and Lake Champlain. Plan for the improvement of the navigation of the Richelieu River and for the maintenance of Lake Champlain at a fixed level by the construction of a movable dam in the Richelieu River at St. Johns. (Third Progress Report, November 27, 1907, at page 5, and appendix E at page 66. Second Progress Report, November 27, 1906, at page 7.)

(2) Power works in the St. Lawrence River near Long Sault Island. This project contemplated the construction of dams, canals, power works, etc., on the American side of the St. Lawrence River near Long Sault or Barnhart's Island, and across the river at that point, if Canadian consent was secured, and either in connection with or independently of like works to be erected on the Canadian side of the boundary, and subject to the approval of the Secretary of War and to the requirement that they be so maintained as to permit of convenient navigation at all times. A bill authorizing the construction of such works was introduced in the House of Representatives in February, 1907, but failed to become a law. (Third Progress Report, November 27, 1907, at page 7.)

(3) Application for a permit for the diversion of 175 cubic feet per second from the Niagara River on the American side at the head of Whirlpool Rapids below the Falls. This application was reported on by the Secretary of the Commission, who reached the conclusion that the development of power at the point indicated would not injure or interfere with the navigable capacity of the river, or affect the integrity or the proper volume of the river as a boundary stream or affect or impair the scenic grandeur of Niagara Falls, on which conclusions the Chairman of the American Section reported that if any permit was required in this case, there was no objection to granting it. (Third

Progress Report, November 27, 1907, at page 1, and appendix A, at page 12.)

(4) Regulation of Lake Erie. The question of the advisability of locating a dam at the outlet of Lake Erie for the benefit of navigation has been referred to the Commission to report with recommendations, looking to an agreement or treaty providing for the construction of such dam. (Third Progress Report, November 27, 1907, at page 8.)

(5) Improvement of Rainy River. The Canadian Government has submitted to the Commission for consideration and report a project for the improvement of the navigation of Rainy River by the construction of a dam at the foot of Long Sault Rapids in that river, a section of which will abut on American territory, and has appropriated $50,000 towards the commencement of this work. As the jurisdiction of the American Section does not extend to these waters, it has referred the question of considering this matter to the Department of State. (Third Progress Report, November 27, 1907, at page 8 and appendix K at page 80.)

(6) Sault Ste. Marie. In addition to the matters above referred to, the Commission has examined the conditions existing at Sault Ste. Marie, and has made a joint report thereon, recommending rules for the control of the same, dated May 3, 1906. (Second Progress Report, November 27, 1906, at page 5, and appendix A at page 11.)

Extract from the recommendations at the end of the joint report of the Commission, dated November 15, 1906, in the matter of the application of The Minnesota Canal & Power Company.

RECOMMENDATIONS.

1. The Commission would, therefore, recommend that the permit applied for be not granted without the concurrence of the Canadian government.

2. As questions involving the same principles and difficulties, liable to create friction, hostile feelings, and reprisals, are liable to arise between the two countries, affecting waters on or crossing the boundary line, the Commission would recommend that a treaty be entered into which will settle the rules and principles upon which all such questions may be peacefully and satisfactorily determined, as they arise.

3. The Commission would recommend that any treaty which may be entered into should define the uses to which international waters may be put by either country without the necessity of adjustment in each instance, and would respectfully suggest that such uses should be declared to be:

(a) Use for necessary domestic and sanitary purposes.

(b) Service of locks used for navigation purposes.

(c) The right to navigate.

4. The Commission would also respectfully suggest that the treaty should prohibit the permanent diversion of navigable streams which cross the international boundary or which form a part thereof, except upon adjustment of the rights of all parties concerned by a permanent commission, and with its consent.

NEW YORK, January 30, 1908.

Hon. Elihu Root, Secretary of State,
Department of State,
Washington, D. C.

MY DEAR MR. ROOT:

I have prepared and enclose herewith for your use a series of extracts from the reports of the International Waterways Commission, including joint reports of the Commission and separate reports of the American Section, containing recommendations with respect to the regulation by treaty of the use of boundary waters.

In this connection I wish to submit for your consideration the suggestion that in entering into any treaty arrangements regulating the use of the waters of Niagara River for power purposes provision be made that no tax or duty shall be laid by the Dominion Government or by the Provincial Government upon the exportation from Canada to the United States of any electric power generated by the use of the boundary waters.

Respectfully yours,

CHANDLER P. ANDERSON.

MEMORANDUM FOR FOREIGN RELATIONS COMMITTEE OF THE SENATE.

(Submitted by the State Department when the Treaty of May 13, 1910, was under consideration.)

In discussing the questions which have been raised in regard to certain provisions of the pending treaty relating to the use of waters along the boundary between the United States and Canada, it is important to have in mind certain

general features of the treaty which may be briefly stated as follows:

(1) The distinction which is drawn in the preliminary article between the boundary waters and waters which are tributary to boundary waters and waters of rivers flowing across the boundary is carefully observed in Articles II and III of the treaty.

(2) Article II applies only to waters which in their natural channels would flow across the boundary or into boundary waters, that is before they have passed the boundary or become part of boundary waters; and it cannot by any construction of its provisions apply to the use of obstruction or diversion of boundary waters.

(3) Article III by its express provisions applies only to uses, obstructions or diversions of boundary waters, and cannot by any construction of its provisions have any application to the use, obstruction or diversion of tributary waters or waters of rivers flowing across the boundary.

(4) Article IV, exclusive of the paragraph thereof relating to the pollution of waters, applies only to waters flowing from boundary waters or to the waters of rivers flowing across the boundary *after they have passed the boundary* and can have no application to waters tributary to boundary waters or to waters of rivers flowing across the boundary before they have passed the boundary.

(5) The jurisdiction of the International Commission is strictly limited by Article VIII to cases arising under Articles III and IV and it will be observed that under Article IV the Commission is given no jurisdiction over cases arising under the pollution clause of that Article; it is evident, therefore, that the International Commission can have no jurisdiction over cases arising under Article II.

(6) The right of action for damages provided for in Article II applies to private or individual interests in distinction from public or governmental interests. Any question on this point is set at rest by the use of the words "injured parties." Wherever the word party is used in the treaty referring to the High Contracting Parties, a capital P is used, so that the absence of the capital and the use of the word in the plural indicates that it can refer only to individuals.

The purpose of this provision of Article II is to permit parties who are injured on the other side of the line to secure the same damages that they would be entitled to if the damages had been done within the same jurisdiction where the cause of the damage originated; but their claim is subject to the laws of the jurisdiction where the cause of the damage arises, and they must come into the courts of that jurisdiction and prove their case on exactly the same footing as if the property injured was within that jurisdiction.

(7) The provisions of Articles II, III and IV do not apply to cases provided for by special agreement between the Parties, and Article XIII defines such special agreements as "not only direct agreements between the High Contracting Parties but also any mutual arrangements between the United States and the Dominion of Canada expressed by current or reciprocal legislation on the part of Congress and the Parliament of the Dominion."

Turning to the questions raised with respect to the pending treaty, it will be found that most of them can be answered conveniently by reference to the above numbered paragraphs.

Taking up the first point made by Senator Nelson, it appears that a large tract of swamp or marsh lands is located near the northwest border of the State of Minnesota, which the state intends some day to reclaim by drainage. The drainage will have to be done through a number of rivers flowing from this tract into the Rainy River within a space of thirty or forty miles from where it empties into the Lake of the Wood. Those rivers under the definition in the preliminary article of the treaty, are tributary waters in distinction from boundary waters and come under the provisions of Article II of the treaty. Senator Nelson raises the point that under the damage clause in Article II, if the drainage of this swamp increases the flow of these tributary rivers to such an extent that damage is done on the other side of the line, a right of action which would not otherwise exist with respect to such damage is created by the treaty. His objection to the provision is understood to be that under existing conditions, the state would not be responsible to its own citizens for any damages that may occur, and should not be made responsible to foreigners for damages suffered by them. It will be observed, however, as pointed out in paragraph

(6) above that the right of action given by Article II is a private right in distinction to a public right, and can be asserted only by individuals in distinction from the Government; and that such parties are given only the same right of action which they would have if they actually were within the State of Minnesota. Therefore, if the State of Minnesota is now at liberty to drain this swamp land as proposed without being liable to any one for damages on its own side of the boundary, it is not believed that this provision will give any right of action to any one on the other side of the boundary.

Moreover, owing to the height of the banks of the Rainy River on the Canadian side for most of the distance through which its flow would be increased on account of the drainage of this swamp land, it does not seem likely that any important damage could result to individual owners there and in any event it is doubtful if the provisions of the treaty contemplated giving a right of action for such an improvement as this, which is not a diversion of waters from their natural watershed, but simply in effect an acceleration of the passage of such waters through the rivers to which they are naturally tributary to the natural outlet which they would ultimately find if left undisturbed. Moreover, normal conditions would be restored as soon as the swamps were drained. So far as any damage from overflowing the banks of the Lake of the Woods on the Canadian side is concerned, on account of the water released from these swamps, here again the shores on the Canadian side are higher than on the American side and any overflowing that would result from such increased volume of water would be more seriously felt on the American side than on the Canadian. In this connection, moreover, it will be remembered that the outlets of the Lake of the Woods are all on the Canadian side, and the present level of the lake is maintained by dams at these outlets, and can be controlled within a range of eight or ten feet by the insertion or removal of stops logs in these dams. The Canadian authorities have control of these dams and at present maintain the level of the lake six or eight feet above its natural level. It is evident, therefore, that if the level should be further raised by draining these swamps into the Lake of the Woods, the responsibility for damage resulting on the Canadian side would rest with the Canadian authorities and not with the State of Minnesota.

Senator Nelson's second objection is that important improvements on tributary streams on the American side of the boundary could not be made except by the consent of the Government of the United States and of the International Joint Commission.

In answer to this point, reference is made to paragraphs numbered (2), (3), (4) and (5) above. It will be noticed that the application of Article III by its own terms is limited to the uses, obstructions or diversions of *boundary waters* affecting the level or flow of boundary waters and, as the rivers to which he refers are tributary streams to boundary waters and come under Article II and not under Article III, the treaty cannot fairly be construed to give the International Commission any jurisdiction over the case he refers to.

The point which Senator Nelson raises above the pollution clause in Article IV is considered separately below.

Taking up Senator Heyburn's objections in the order in which they are stated in his memorandum, his first point raises the objection that the Lake of the Woods should not be included with the other boundary waters under the provision extending mutually the privilege of free navigation on both sides of the line. This objection seems to be based on the view that this provision is a surrender of jurisdiction over the portion of the Lake of the Woods which lies wholly within the United States, but it is submitted that the provisions of the treaty are not susceptible of that construction. By the provision of Article I, the privilege of free navigation is expressly subjected to any laws or regulations of either country within its own territory not inconsistent with such privilege of free navigation and applying equally and without discrimination to the inhabitants, ships, vessels and boats of both countries. Moreover, unless the Lake of the Woods is given the same treatment under Article I as all other boundary waters, it would be impossible to include it among boundary waters under Article III of the treaty, and the advantages to the United States of so doing are obvious, as the outlets are all on the Canadian side.

Furthermore it would seem that there

could be no serious objections to placing the Lake of the Woods in the same category as the Great Lakes System, including Lake Michigan, in which the right of free navigation is given under Article XXVIII of the treaty of 1871, although its waters are wholly within the territory of the United States.

Senator Heyburn's second objection is answered by reference to paragraphs number (1), (2) and (6) above.

Senator Heyburn's third objection raises the point that under the provisions of Article IV the International Commission might undertake to control the use of the waters of the Kootenai or Columbia Rivers as far away as eight hundred miles from the boundary. Reference to the provisions of this article will show that it applies to the construction or maintenance of remedial or protective works or dams or obstructions "*in waters flowing from boundary waters* or in waters at *a lower level than the boundary rivers flowing across the boundary,* the effect of which is to raise the natural level of the waters on the other side of the boundary." It would seem to be clear from this provision that it applies only to cases where the effect of obstructions on one side of the boundary in the waters referred to, would result in overflowing lands on the other side of the boundary. Such obstructions, therefore, would have to be in immediate proximity to the boundary. A particular case in point will be found in the damming of Rosseau River by the Canadians immediately below the point where it crosses the boundary, the result of which has been to raise the natural level of its waters so as to overflow its banks on the American side. It is only in such a case as this that the Commission is given jurisdiction under this article, and it is not believed that any case could possibly arise over which the jurisdiction of the Commission would extend to any obstruction at any great distance from the boundary.

The fourth point raised by Senator Heyburn is that the rules or principles adopted under Article VIII for the regulation of the use of boundary waters are inconsistent with the uses of waters as fixed by the laws and constitution of the State of Idaho. It will be observed, however, that these rules and regulations apply only to the use of waters defined in the treaty as boundary waters, and that there are no waters of that description along the boundary of the State of Idaho. Such rules and regulations, therefore, cannot in their practical application come into conflict with the laws and constitution of the State of Idaho.

The Pollution Clause in Article IV— Objection has been made to this clause on the ground that its enforcement might interfere with the existing drainage systems in the large cities along the boundary lakes and particularly at Lake Champlain. An examination of this clause will show that cases arising under it are not subject to the jurisdiction of the International Commission. Its construction and application therefore rests with the parties themselves. It will be observed that, by the terms of the clause, it applies only to cases involving an injury to health or property on the other side of the boundary, and in the light of scientific knowledge of the present day, there would seem to be only a very remote possibility that any such cases could arise on account of the drainage of sewage systems into any of these lakes. It will be remembered that in the case of the Chicago Drainage Canal, the State of Missouri sought to show that the discharge of the Chicago sewage into the Illinois River rendered the waters of that river and of the Mississippi unfit to drink, but the Supreme Court of the United States held in that case that "it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill-smelling now it is a comparatively clear stream to which edible fish have returned. Its water is drunk by the fishermen, it is said without evil results."

It is a well-known scientific fact that flowing water or large bodies of open waters purify themselves very rapidly, and in view of the situation which the Supreme Court has found to exist in the case of the Illinois River, it seems hardly possible that anywhere along the boundary waters any injury to health or property would result from the discharge of drainage systems into them. The clause under consideration was intended to apply more particularly to the pollution of waters by chemicals or dye stuffs or other poisonous substances used in various manufacturing processes. Such practices are necessarily injurious to health and destructive of food fishes in these waters, and inas-

much as there are many cases of this kind on both sides of the boundary and unless checked by joint action of the two countries will result in great injury to the general interests of both countries along the border. It seemed desirable that some provision should be made for governmental control over them, and it was for this purpose particularly that this clause was inserted in the treaty.

Lake Michigan.—The waters of Lake Michigan do not come within the definition of boundary waters as defined in the preliminary article in the treaty and it will be noted that in Article I of the treaty, the waters of this lake are not included among the boundary waters of the Great Lake system, but are covered by a special provision in the second paragraph of that article. The question has arisen as to the effect upon Lake Michigan of the provisions of Article II which deals with tributary waters or rather with all waters which in their natural channels flow across the boundary or into boundary waters, and the objection is made that if the provisions of this Article apply to Lake Michigan, the right to recover damages for injuries resulting on the other side of the line on account of the diversion of tributary waters might interfere with the diversion of the waters of Lake Michigan for the purposes of the Chicago Canal.

In response to this objection, attention is called to the express provision in this Article that it shall not apply to cases already existing which would seem to cover and was certainly intended to cover the canal system at Chicago. But in any case, an examination of the provisions of the article will show that, as pointed out in paragraph numbered (6) above, the right of action for damages applies to private or individual interests in distinction from public or governmental interests, and such interests are given only the same rights which similar interests on the American side of the line would have in the absence of this treaty.

In effect, this provision brings the Canadian interests within the jurisdiction of the United States for this purpose. The treaty therefore recognizes that the settlement of the question of the use of the waters of Lake Michigan is purely a domestic question and leaves undisturbed the governmental rights of the United States with respect to it. But this is the view of Great Britain and Canada as shown by the last paragraph of the article which reserves to each of the High Contracting Parties any right which it may now have to object to any interference with or diversion of waters on the other side of the boundary, the effect of which would be productive of material injury to the navigation interests on its own side of the boundary. This provision relates to public interests in distinction from private interests, and would be wholly unnecessary if under the preceding provisions of the article any right was given to recover damages for injuries to public interests on the other side of the line.

CHANDLER ANDERSON.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Mr. Geo. H. Boenig, No. 39 S. La Salle St., protesting against the assembling of house boats in the North Shore Channel at Berteau avenue.

Referred to the Committee on Real Estate Development.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Clark presented the bond of Mr. Walter G. Davis, Manager of the Real Estate Department of the Sanitary District, in the sum of $25,000.00, with the Royal Indemnity Company thereon as surety, given for the faithful performance and discharge of his duties of office, and moved that the bond be approved.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Paullin presented the following ordinance:

AN ORDINANCE

Amending an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on October 28, 1915, "Providing Certain Rules and Regulations and Rules of Order of the Board of Trustees of the Sanitary District of Chicago," as Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago December 23, 1915, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on December 1, 1916, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary Disctrict of Chicago on January 4, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 11, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on January 18, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of the Sanitary District of Chicago on April 5, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on May 3, 1917, and as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on July 12, 1917.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That Section 1 of an ordinance passed by the Board of Trustees of The Sanitary District of Chicago on October 28, 1915, as amended, be, and the same is hereby further amended by adding after the word "sharp" in line 36 of the first column of page 1414 of the proceedings of October 21, 1915, the following words and figures, to-wit:

"Provided that during the months of July, August and September, 1919, and during the months of May, June, July, August and September of each year thereafter, said regular meetings shall be held at 2:00 o'clock P. M. sharp on the first and third Thursdays of each of said months."

SEC. 2. This ordinance shall be in force and effect from and after its passage.

Mr. Paullin moved that the ordinance be referred to the Committee on Rules.

The motion prevailed.

Payroll of The Sanitary District of Chicago for the Month of February, 1919.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakwood Ave., President of Board	$ 625.00
Wm. J. Healy, 716 W. Madison St., Trustee	416.67
Harry E. Littler, 2505 N. Washtenaw Ave., Trustee	416.67
Willis O. Nance, 30 N. Michigan Ave., Trustee	416.67
Wallace G Clark, 30 N. Michigan Ave., Trustee	416.67
George W. Paullin, 30 N. Michigan Ave., Trustee	416.67
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.67
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.67
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.67
Wm. B. Foley, 819 Independence Blvd., Secretary to President	333.34
Total	$ 4,291.62

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7950 Harvard Ave., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 S. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	180.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	.95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	220.00
Daniel Huguenin, 920 Audrie Pl., Superintendent of Efficiency, 1½ months	450.00

Accounting and Record Division

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Record Clerk	80.50
Chas. Dingee, 912 Lake Ave., Wilmette, Ill., Warrant and Voucher Record Clerk, 5 days	28.57
G. A. Kelly, 436 Homan Ave., Budget Bookkeeper	250.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. T. Graham, 3115 S. Union Ave., Budget Clerk	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Helen Shine, 1118 W. Garfield Blvd., Stenographer	100.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier	125.00

Temporary Employe.

Francis J. Sullivan, 2422 W. Superior St	133.06
Total	$ 5,143.80

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Irene Mueller, 5017 S. Wood St., Secretary-Stenographer	135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 260.00

DEPARTMENT OF LAW.

C. Arch Williams, 4536 Drexel Blvd., Attorney	833.33
Ross C Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	558.33
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst. Attorney	588.34
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	275.00
George H. Hough. 500 Diversey Pkwy., Asst. Attorney	250.00
A. A. Bach, 6005 S. La Salle St., Law Clerk	200.00
Matilda M. Lynn, 5343 Kenmore Ave., Voucher Clerk and Bookkeeper	125.00
Miriam Ehrlich, 3129 Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	17500
Graham B. Trainer, 5202 Cornell Ave., Messenger	85.00
George Neupert, 75 W. Jackson Blvd., Investigator	175.00
J. Walter Nielsen, 2204 Kimball Ave., Investigator	125.00
Francis Rodney, 537 E. 34th St., Stenographer	110.00
Lillian Gottschalk, 2505 N. Washtenaw Ave., Stenographer, 27 days	116.07
Total	$ 7,134.40

DEPARTMENT OF POLICE.

Wm. E. Carter, 829 Simpson St., Evanston, Ill., Marshall	250.00
Joseph Kennefick, 3907 Emerald Ave., Sergeant	145.00
James Haggerty, 3201 Princeton Ave., Sergegant	145.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	145.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	135.00
Daniel D. Curtin, 3313 W. Madison St., Patrolman	10.00
Sylvester O'Brien, 7318 Langley Ave., Patrolman	7.42
Michael Plunkett, 100 S. Sangamon St., Patrolman	10.00
Joseph F. Ring, 1210 N. Halsted St., Patrolman	1.29
James B. Walsh, 65 E. 42nd St., Patrolman	8.71
Emil Klank, 3616 S. Western Ave., Patrolman	135.00
Matthew Tychsen, 812 Massasoit Ave., Patrolman	7.42
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	135.00
Edward Morrissey, 157 N. Sheldon St., Patrolman, 21 days	99.25
Tony Alessi, 2547 Wallace St., Patrolman	135.00
Anton J. Stasch, 2938 N. Springfield Ave., Patrolman	1.29
Frank Uczciwek, 1226 Cleaver St., Patrolman	10.00
Anthony Intrieri, 914 W. Polk St., Patrolman	10.00
Wm. Moran, 6229 S. Lincoln St., Patrolman	10.00
John J. Burke, 1252 S. Keeler Ave., Patrolman	10.00
John Conlon, 360 Wendel St., Patrolman	135.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	135.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	135.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	135.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	135.00
R. J. Dooley, 2146 W. 21st Pl., Patrolman	10.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	135.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	135.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	135.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	135.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	135.00
John E. Pierce, 4080 S. Wells St., Patrolman	135.00

Frank Timoney, 732 N. Leavitt St., Patrolman	10.00
James Mooney, 3450 Walnut St., Patrolman	135.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	125.00
Charles A. Ison, 5926 S. Wood St., Patrolman	125.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	125.00
Denis McCaffrey, 3919 Jackson Blvd., Patrolman	10.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	115.00
Frank Kouba, 656 W. 18th St., Patrolman	115.00
N. C. Van Slooten, 2103 N. Karlov Ave., Patrolman	100.00
Wolf Cohen, 1611 S. Trumbull Ave., Patrolman, 15 days	50.00
Edward Marose, 2622 S. Trumbull Ave., Patrolman	100.00
John J. Gleason, 3026 Emerald Ave., Patrolman, 15 days	57.50
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	135.00
A. J. McVady, 6432 Drexel Ave., Patrolman	10.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
Peter J. Trenz, 1931 Cuyler Ave., Patrolman	10.00
Geo. E. Paul, 4903 N. Ridgeway Ave., Patrolman, 4 days	16.43
George A. Keller, 2820 Warren Ave., Patrolman	115.00
J. T. Johnson, Lemont, Ill., Patrolman	115.00
Barney Klecka, 1853 S. Western Ave., Patrolman	115.00
Chas. R. Fross, 801 E. 41st St., Patrolman	115.00
Michael Conway, 1944 N. Lincoln St., Patrolman	107.50
Jos. W. Doratis, 10455 S. Michigan Ave., Patrolman	100.00
Fred O. Wolff, 2023 Superior St., Patrolman	100.00
Jas. Hughes, 1836 N. Paulina St., Patrolman, 27 days	116.07
Frank J. Raetzke, 2701 S. Karlov Ave., Patrolman	100.00
Frank L. Sequeens, 4847 S. Loomis St., Patrolman	100.00
Louis J. Christianson, 4335 Fullerton Ave., Patrolman	100.00
Edw. R. Hruby, 1528 S. Kenneth Ave., Patrolman, 15 days	50.00
Walter Richards, 3017 Fulton St., Patrolman, 15 days	50.00
H. M. Legel, 918 N. Fairfield Ave., Patrolman, 15 days	50.00
W. Paine, 210 Honore St., Patrolman, 8 days	28.57
A. E. Holmes, 918 N. Fairfield Ave., Patrolman, 15 days	50.00
Total	$ 5,901.45

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 600.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	350.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	225.00
O. W. Boers, Chillicothe, Ill., Draftsman	225.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	175.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	140.00
L. H. Welcome, 553 W. 35th St., Computor	115.00
John Markham, 1243 Foster Ave., Chicago, Ill., Rodman	100.00
Total	$ 1,930.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 8.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	7.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	8.00
Joseph Limacher, Minooka, Ill., Gauge Reader	7.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	7.00
William Camegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	7.00
M. Brumbach, La Salle Co. Asylum, Ottawa, Ill., Gauge Reader	7.00
Sam G. Belt, 1006 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	12.00
John Brookman, Seneca, Ill., Gauge Reader	7.00
George A. Campbell, Marseilles, Ill., Gauge Reader	7.00
Noah Morial, Marseilles, Ill., Gauge Reader	7.00

James McGrogan, Dayton, Ill., Gauge Reader	8.00
C. H. Barnard, C., B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	12.00
George Keeley, Wilmington, Ill., Gauge Reader	7.00
Bernard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	8.00
Peter De Groot, Peru, Ill., Water Sampler and Gauge Reader	12.00
Henry Harbeck, Utica, Ill., Gauge Reader	7.00
David Gleason, DePue, Ill., Gauge Reader	7.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	7.00
Philip Riley, Lacon, Ill., Gauge Reader	7.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	7.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	7.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	7.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	7.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	7.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	7.00
William LeTissier, Bath, Ill., Gauge Reader	7.00
W. L. Waters, Browning, Ill., Gauge Reader	7.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	7.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	7.00
Total	$ 229.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	458.32
Philip Harrington, 117 N. Kildare Ave., Division Engineer	458.32
Murray Blanchard, 4355 Lake Park Ave., Assistant Engineer, 15 days	125.00
E. L. Cooley, 136 Indiana Ave., Asst. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Junior Engineer	225.00
J. T. Soderstam, 1211 Newport Ave., Draftsman, 28½ days	175.00
Fred W. Kirk, 68 E. 56th St., Draftsman	190.00
M. P. Williams, 2749 Washington Blvd., Draftsman	190.00
R. G. Galke, 1834 Eddy St., Draftsman	190.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
Nellie McArdle, 8019 Green St., Stenographer	140.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	155.00
Edwin C. Crowe, 2318 N. Kenneth Ave., Tracer	115.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	391.66
Ingolf Erdal, 1504 S. 4th Av., Maywood, Bridge Computer	250.00
Edwin A. Howes, 5340 Windsor Ave., Bridge Computer	250.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Computer	250.00
Richard DeYoung, 10226 State St., Bridge Draftsman	260.00
Ray C. Brown, 1249 Foster Ave., Draftsman, 8 days	57.14
A. M. Finkel, 1610 S. Turner Ave., Tracer, 5 days	26.79
Stanley A. Jankowski, 3222 Wall St., Sub Instrument Man	130.00
F. E. Helmick, 6030 Union Ave., Sub Instrument Man	130.00

Record Division.

W. T. Lynch, 5643 Wayne Ave., Record Clerk	225.00
Theodore Buskirk, 3903 Ellis St., Resident Engineer	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	190.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Computer	130.00
E. Edinger, 3259 Indiana Ave., Clerk	145.00
Geo. W. Schmidt, 1143 Oakdale Ave., Computer	120.00
Gertrude Scharlau, 4231 N. Whipple St., Stenographer	110.00
John Brunton, 5072 Lincoln Ave., Computer	120.00

Hydraulic Measurements Division.

Total	$ 8,538.89

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
Michael Gunnip, 5418 Loomis St., Rodman, 15 days	57.50
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Frank Palermo, 7037 S. Hermitage Ave., Launch Engineer	135.00
John Murphy, 3740 Emerald Ave., Rodman	115.00
Rudolph Christoph, 2139 Melrose St., Superintendent	97.50
Jos. J. Kelly, 3155 Union Ave., Rodman, 15 days	57.50
Total	$ 1,075.83

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 600.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer	225.00
L. C. Whittemore, 1216 E. 54th St., Asst. Sanitary Engineer	300.00
O. L. Eltinge, 6753 La Fayette Ave., Asst. Engineer, 18 days	144.64
E. R. Richards, 8225 S. Wabash Ave., Draftsman, 12 days	64.29
John R. Palmer, 724 Cuter Ave., Evanston, Asst. Chemist	150.00
Herbert Swanson, 903 N. Central Ave., Asst. Chemist	72.50
P. E. Connor, 712 Ash St., Winetka, Ill., Junior Engineer	225.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
E. A. Morgan, 5418 Loomis St., Harvey, Asst. Chemist	150.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	175.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Assistant	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A.	150.00

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	300.00
Arthur A. Bleau, 3141 Princeton Ave., Draftsman	175.00
L. W. A. Bunge, 418 Taylor St., Oak Park, Asst. M. Engineer	75.00
William A. Dundas, 5521 Sangamon St., Asst. M. Engineer, 9 days	56.25
D. P. Fleming, 5959 Superior St., Asst. M. Eng., 8 days	50.00
Total	$ 3,462.68

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	$ 458.32
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. B. Barker, 550 E. 50th Pl., Resident Engineer	250.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Junior Engineer	250.00
N. R. Herlihy, 2743 N. Albany Ave., Instrument Man	200.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Gibson Gorman, 2731 W. 35th St., Sub-Instrument Man, 26 days	116.07
J. W. Beckstrom, 2821 Thayer St., Evanston, Inspector	125.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Inspector	125.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 E. Ohio St., Rodman	145.00
Robert Gilmartin, 3302 S. Seeley Ave., Rodman	125.00
Thomas Doyle, 3527 Lowe Ave., Rodman	115.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
George T. Giles, 4862 Winthrop Ave., Filter Attendant	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00

Richard Boegelsack, 10522 Avenue M, Rodman	115.00
J. J. Savage, 407 S. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	115.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	107.50
Total	$ 3,602.89

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Junior Engineer	225.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector	115.00
Maurice J. Powers, 3621 Union Ave., Rodman	115.00
Edward E. Bochmann, 473 York Pl., Blue Island, Rodman	145.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
W. A. Grundy, 2043 Ogden Ave., Inspector, 20 days	84.82
Total	$ 1,265.82

Sag Channel Construction Division.

John D. Hurley, 7437 W. 62nd Pl., Asst. Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Rodman, 24 days	106.79
Richard F. Kelly, 3119 W. 42nd Pl., Sub Instrumentman	130.00
Arthur J. Youngberg, 1408 Melrose St., Rodman, 27 days	106.79
Geo. Parker, 1816 Prairie Ave., Computer	120.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Flagman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
Carmine Laurino, 909 S. State St., Rodman, 15 days	57.50
Total	$ 1,187.08

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, North Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer, 15 days	75.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Daniel Gleason, 848 Rush St., Engineer and Machinist, 15 days	75.00
Max Nork, 4428 S. Albany Ave., Machinist	166.20
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
John A. Miller, 2543 N. Racine Ave., Stationary Engineer, 15 days	75.00
Jos. Runnella, 455 W. 25th Pl., Laborer	96.00
Alex. Kluczuski, 2443 W. 34th Pl., Laborer, 8 days	27.43
Jos. Vengler, 6429 S. Peoria St., Craneman	168.00
Joe Ranctre, 2512 Lowe Ave., Laborer, 15 days	51.43
Frank Shafer, 2044 Flournoy St., Laborer, 2 days	6.86

Louis Barzen, 2810 S. Wells St., Laborer, 8 days	27.43
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank Dushek, 3232 Wallace St., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler	110.00
Samuel Vanderweil, 10934 Michigan Ave., Laborer	96.00
Arthur LaBeau, 4952 Marshfield Ave., Laborer	96.00
Frank Belcastro, 2454 W. Huron St., Laborer	96.00
James Roach, 2949 Lyman St., Laborer	96.00
John Buttny, 3755 Hermitage Ave., Laborer	96.00
Fred Bergman, 6616 S. Robey St., Fireman	110.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 319 W. 25th Pl., Laborer	96.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter Helper	167.50
Patrick Holland, 4156 Wells St., Steam Fitter	167.50
Bruno Salarno, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
E. Ryan, 2715 Emerald Ave., Oiler	110.00
M. F. Schopf, 508 S. 9th Ave., Maywood, Engineer, 15 days	75.00
Total	$ 4,408.35

LAWRENCE AVENUE PUMPING STATION.

James A. Shay, 5300 S. Peoria St., Engineer in Charge	200.00
Pat Grady, 835 W. 54th Pl., Laborer	96.00
Jos. McGuire, 2612 Fullerton Ave., Laborer	96.00
M. F. Schopf, 1107 Wrightwood Ave., Stationary Engineer, 15 days	75.00
Daniel Gleason, 848 Rush St., Machinist and Engineer, 15 days	75.00
Christopher J. Heaney, 7531 Yale Ave., Stationary Engineer, 15 days	75.00
Matt. O'Connell, 3520 Union Ave., Laborer, 7 days	24.00
Tho. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 1941 Warner Ave., Oiler	110.00
Dan O'Hern, 3603 Lowe Ave., Oiler, 15 days	75.00
George O'Leary, 5705 Union Ave., Oiler	110.00
Albert C. Selle, 429 N. Sawyer Ave., Oiler	110.00
James O'Leary, 3449 N. Troy St., Fireman	110.00
Adam Klein, 2745 Ward St., Fireman	110.00
George Stumpf, 2049 Bingham St., Engineer, 27 days	139.29
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave.	110.00
T. J. Reaney, 3838 Park Ave., Janitor	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
Thos. Brannigan, 732 W. Madison St., Laborer	96.00
John A. Miller, 2543 N. Racine Ave., Engineer, 15 days	75.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter	167.50
Bronislaw Wosny, 2332 N. Maplewood Ave., Oiler	110.00
Total	$ 2,701.79

Survey North Branch Chicago River, Account Sewerage Disposal Plant.

Norman Newlands, 4902 N. Albany Ave., Resident Engineer	$ 225.00
Walter H. Faget, 3565 W. Van Buren St., Jr. Engineer	175.00
James L. Hackett, 4932 Forrestville Ave., Jr. Engineer, 27 days	172.50
Rudolph Christoph, 2159 Melrose St., Superintendent, 15 days	82.50
Wm. J. Jaeger, 3028 Emerald Ave., Sub-Instrument Man	130.00
Geo. F. Fitgerald, 189 Walnut St., Blue Island, Sub-Instrument Man	130.00
Wm. J. Bonn, 1343 W. Garfield Blvd., Sub-Instrument Man	130.00

John S. Malkowski, 947 W. Chicago Ave., Sub-Instrument Man, 24 days	106.79
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
Michael Gunnip, 5418 Loomis St., Rodman, 15 days	57.50
Henry Altman, 7000 Laflin St., Rodman	115.00
Milton J. Kman, 5214 Lowe Ave., Rodman	115.00
James J. Ryan, 3729 Emerald Ave., Rodman	115.00
John Richards, 2641 Princeton Ave., Rodman	115.00
Jas. J. Kelly, 3155 Union Ave., Rodman, 15 days	57.50
John Witt, 2057 W. 21st Pl., Rodman	100.00
Clarence E. Wilson, 2817 N. Clark st	115.00
Chas. McMorrow, 6817 Wabash Ave., Rodman	100.00
Total	$ 2,159.29

LOCK, DAM AND BRIDGE TENDER.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
Charles J. Case, 3247 W. Division St., Asst. Dam Tender, 15 days	50.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, 7140 Emerald Ave., Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
F. W. Worst, 121 E. 10th St., Lockport, Ill., Asst. Dam Tender, 15 days	50.00
Total	$ 940.00

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
Marie Reardon, 7002 Laflin St., Record Clerk, 3 days	15.00
May Broderick, 4208 Adams St., Stenographer	140.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., Clerk	125.00
Frank A. Stadler, 2906 Lincoln Ave., Clerk, 15 days	62.50
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	135.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
Walter Merritt, 513 S. Leavitt St., Ledger Clerk, 10 days	44.60
Geo. Bachelder, 4600 Troy St., Clerk	125.00
Walter Kuhneman, 6353 Sangamon St., Clerk	125.00
John Conlon, 3343 Lowe Ave., Office Asst., 10 days	26.80
John L. Fitzsimons, 5301 Union Ave., Clerk	125.00
Clarence F. Reich, 2703 N Ahland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3022 Ogood St., Clerk	125.00
Frank J. Martin, 1141 N. Lockwood St	125.00
Leo J. Feeney, 8942 S. Laflin St., Office Boy	60.00

Storeroom.

John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 4502 Emerald Ave., Warehouseman	100.00
Michael Bell, 7929 S. Morgan St., Warehouseman	100.00

W. Kamberg, 5044 S. Marshfield Ave., Storekeeper, 9 days..... 58.85
J. Reuhmann, 6544 S. Lincoln St., Storekeeper, 18 days..... 91.05
Chas. Trouth, 2929 Wentworth Ave., Watchman..... 96.00
John J. Hartnett, 6506 Marshfield Ave., Watchman..... 96.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent..... 200.00
F. F. Anderson, 3719 Ohio St., Inspector..... 175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect..... 300.00
Thomas Kelly, 220 W. 106th Pl., Inspector..... 175.00
Fred Meyer, 3510 Broadway, Draftsman..... 150.00
B. H. Young, 4209 Indiana Ave., Carpenter..... 134.40
C. R. Lyons, 3036 Shields Ave., Carpenter..... 128.00
J. C. Kraiss, 3327 S. Hamilton Ave., Painter..... 120.00

Engineering Division.

G. F. Maddox, 4442 Magnolia Ave., Draftsman..... 200.00
Chas. Raymond, 3841 Monroe St., Clerk..... 125.00
W. B. Lambe, 1414 E. 53d St., Inspector and Appraiser, 26 days..... 133.93
John Miller, 4449 Lowe Ave., Draftsman..... 189.92

Testing Division.

F. A. DeMuth, 4247 W. 21st St., Testing Engineer..... 230.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician..... 180.00
H. E. Burket, 17 E. Ohio St., Electrician..... 155.00
E. P. Spreigel, 2451 Station St., Electrician, 14 days..... 76.78
R. L. Walsh, 4445 Ellis Ave., Electrician, 5 days..... 27.68
R. C. Pedrick, 2418 W. 36th St., Electrician..... 175.00
H. Hullinger, 1222 W. 31st St., Electrician Helper..... 150.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper..... 150.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters..... 230.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector..... 180.00
George Enright, 1439 W. Marquette Road, Meter Inspector..... 155.00
W. E. Jones, 4631 Lake Park Ave., Meter Inspector, 7 days..... 35.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper..... 130.00
S. Murphy, 1534 Edgemont Ave., Meter Reader..... 130.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader..... 155.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector..... 155.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector..... 130.00

Operating Division.

W. J. More, 4942 N. Spaulding Ave., Operating Engineer..... 325.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer..... 255.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk..... 125.00
Robert J. Klaiber, 722 South Blvd., Evanton, Stenographer and Clerk..... 125.00
Jas. A. Haggerty, 3532 Van Buren St., Draftsman..... 125.00
Grace Lenz, 755 Bowen Ave., Temporary Telephone Operator, 7 days..... 20.95
J. P. Lynch, 2842 Union Ave., Foreman..... 109.00
T. O'Leary, 316 S. Aberdeen St., Laborer..... 87.30
Isabel Ward, 6548 Glenwood Ave., Telephone Operator..... 85.00
L. A. Jones, 3538 Vernon Ave., Relief Operator..... 140.00
J. T. Layton, 6511 S. Artesian Ave., Relief Operator..... 160.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator..... 160.00
Chas. Busch, 56 E. 100th St., Messenger..... 85.00
M. K. Badke, 2950 Keeley St., Utility Man..... 100.00
Max Ebler, 2226 Wabash Ave., Relief Operator..... 140.00
J. Mildenberg, 3744 N. Spaulding Ave., Relief Operator..... 140.00

Underground Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	240.00
J. Sharp, 2324 W. Madison St., Foreman	240.00
J. Lamping, 3016 Congress St., Foreman	205.00
C. C. Wilson, 3214 N. Whipple St., Foreman	205.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	205.00
I. L. Damrow, 6417 S. Campbell Ave., Temporary Foreman	180.00
C. O'Leary, 646 W. 47th Pl., Lineman	180.00
Edward Lee, 6343 Carpenter St., Lineman	180.00
W. F. Jones, 3306 Irving Ave., Lineman	180.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	180.00
A. R. Ver Schare, 7836 S. Carpenter St., Lineman	180.00
Fred Dushek, 3232 Wallace St., Lineman, 5 days	29.45
Thos. Lane, 5740 S. Lincoln St., Groundman	130.00
James Britton, 3039 Pitney Court, Lineman	180.00
A. Jorgenson, 2153 Keystone Ave., Lineman	180.00
H. Inglebright, 1039 Barry Ave., Lineman	180.00
Owen McLane, 6053 S. Halsted St., Acting Foreman Lineman	180.00
J. R. Weston, 4709 Harrison St., Lineman	180.00
P. B. Simonton, 218 S. Western Ave., Lineman	196.53
Dennis Nolan, 448 Root St., Groundman	130.00
Thomas Woods, 1244 Washington Blvd., Groundman	130.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer	155.75
E. Pearson, 1020 Roscoe St., Cable Splicer	120.75
J. J. Elliott, 1364 E. 61st St., Cable Splicer	148.75
H. J. Berninger, 414 S. Lincoln St., Cable Splicer	105.00
W. Brunsworth, 2921 W. 40th St., Cable Splicer	106.25
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer	74.15
A. J. Peck, 5010 Calumet Ave., Cable Splicer	38.50
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper	111.25
Thos. J. Healy, 4519 Washington Blvd., Cable Splicer Helper	38.50
Patrick Ryan, 3719 Colorado Ave., Cable Splicer Helper	27.50

Inside Maintenance and Construction Division.

Jos. Miller, 944 W. 51st Pl., Foreman	191.73
Henry Haag, 2633 Monroe, Repairman	170.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	170.00
Paul Matt, 5108 N. Leavitt St., Repairman	170.00
John Weber, 2537 Calvin St., Operator	145.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	145.00
Edw. Schneider, 4735 W. Huron St., Asst. Repairman, 27 days	120.71

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	275.00
R. G. Close, 513 E. 11th St., Lockport, Operator	215.00
B. F. Konapack, 804 2nd Ave., Joliet, Operator	210.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	210.00
Geo. Simmons, Lockport, Ill., Asst. Operator	160.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	210.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerberg, 103 Iowa Ave., Joliet, Machinist	27.20
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Oiler	160.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	160.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 5425 Chicago St., Joliet, Oiler	125.00
Robert Curry, 110 Katalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Oiler	143.56

A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist	217.97
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	185.00
M. C. Rich, Lockport, Ill., Maintenance Man	185.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Laborer	157.55
G. Johnson, Lockport, Ill., Laborer	117.00
P. Roach, Lockport, Ill., Laborer	112.50
J. Boza, Lemont, Ill., Laborer	120.00
M. Powalish, Lemont, Ill., Laborer	116.00
C. Barr, Lockport, Ill., Laborer	120.25
R. Leidig, Lockport, Ill., Laborer	102.50
D. Faletti, Joliet, Ill., Laborer	106.00
A. Rodighiero, Lockport, Ill., Laborer	97.75
P. Lyons, E. 17th St., Lockport, Laborer	113.25
Alf. Johnson, 18th and Jefferson, Lockport, Laborer	113.25
Chas. Carlson, 12th St., Lockport, Laborer	90.75
J. Boe, 610 Webster St., Joliet, Ill., Carpenter	67.90
N. Murray, 9th St. and Hamilton Ave., Helper	58.20

Terminal.

J. F. Vedder, 6834 Yale Ave., Dispatcher	195.00
W. J. Kloss, 3220 N. Sacramento Ave., Load Dispatcher	195.00
M. T. Coughlin, 434 E. 46th St., Load Dispatcher	195.00
J. S. Black, 6155 S. Laflin St., Load Dispatcher Relief)	195.00
Edw. Held, 3429 Parker Ave., Switchboard Operator	170.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	170.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	160.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator	160.00
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	160.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	170.00

Blue Island.

Harriet Stephens, 65 New St., Blue Island, Clerk	95.00
Wm. H. Greene, 639 York St., Blue Island, Operator	140.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	140.00
Chas. Weber, 230 Walnut St., Operator	140.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	140.00
S. J. Cannon, 1309 Emerson St., Locktender and Janitor	100.00
A. Underdown, 706 Main St., Evanston, Operator	140.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator	140.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator	140.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator	195.00
Knute Anderson, 6324 Wentworth Ave., Operator	170.00
Frank C. Lambert, 5526 S. Lincoln St., Operator	160.00
E. P. Spriegel, 2451 Station St., Operator, 15 days	87.50
Henry Lawson, 1627 Orrington Ave., Evanston, Operator, 27 days	134.64

Ashland Avenue.

C. J. Ward, 3001 S. Canal St., Operator	140.00
Robt. Perry, 1244 Washington Blvd., Operator, 25 days	108.93
H. E. Reilly, 4445 Wallace St., Operator	140.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator	140.00
E. Martin, 1925 Otto St., Temporary Operator, 3 days	28.93
Frank Davidson, 932 Rush St., Operator	140.00
Geo. Long, 1045 Oakdale Ave., Operator, 14 days	63.75
Chas. Devine, 1513 Greenwood St., Evanston, Operator, 4 days	18.85

West Twelfth Street.

W. E. Nancarrow, 4648 Warwick Ave., Operator	140.00
P. J. English, 3416 S. Marshfield Ave., Operator	140.00
E. P. DeBarr, 825 George St., Operator	140.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator	147.50
R. Hardell, 3142 N. Robey St., Engineer	170.00
P. Kacyerzewski, 2354 Elston Ave., Operator	145.89
S. H. Reed, 2742 N. Crawford Ave., Operator	140.00

Forest Park.

R. W. C. Newmann, 7416 Washington St., Operator	140.00
A. Stange, 504 Ferdinand St., Temporary Operator	140.00
Thos. Podraza, 1363 W. Chicago Ave., Operator	140.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Engineer	50.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Engineer	40.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst Engineer	40.00

Utility Equipment Division.

Wm. J. H. Schultz, 3440 Fulton St., Foreman	175.00
B. H. Stuber, 3029 Union Ave., Machinist	193.53
Charles F. Larson, 6718 St. Lawrence Ave., Machinist	200.13
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4407 Normal Ave., Washer	96.00
Sidney Smith, 1221 W. Rand St., Washer	96.00
Geo. B. Kelly, 834 N. Springfield Ave., Captain Robert R	175.00
Thomas J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R	175.00
George H. Gardner, 1732 Clifton Park Ave., Engineer, Robert R	175.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A	150.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur	140.00
John Dean, 607 Belden Ave., Chauffeur	140.00
J. Neckerman, 4411 Federal St., Chauffeur	140.00
John Creen, 3002 Emerald Ave., Chauffeur	140.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R	130.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	140.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	140.00
J. McCummisky, 5630 S. Carpenter St., Chauffeur	126.86

Temporary Roll—Architectural Division.

Theo. Frantz, 5344 S. Winchester Ave., Laborer	100.00
Pat Conners, 10603 Lafayette Ave., Laborer	100.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Acting Foreman	205.00
Wm. G. Zepp, 5749 Drexel Ave., Lineman	180.00
Frank Hobbs, 2704 Warren Ave., Lineman	180.00
Frank Guibard, 5731 Aberdeen St., Lineman	180.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	180.00
John J. Dassie, 3616 W. 83rd St., Lineman	180.00
J. M. Kelly, 6147 Newberry Ave., Lineman	180.00
D. McAvoy, 3317 W. Madison St., Lineman	180.00

W. Glass, 3738 Madison St., Lineman	180.00
Michael Hogan, 1507 W. 76th Pl., Groundsman	130.00
Joy McConkey, 2903 Warren Ave., Lineman	15.00
F. S. Allen, 4026 Washington Blvd., Lineman	180.00
Thos. J. Falls, 5661 Shields Ave., Lineman	180.00
James F. Barry, 218 S. Western Ave., Lineman	180.00
G. Swearinger, 2328 Monroe St., Lineman, 11 days	64.79
T. A. Singer, 3718 Grand Ave., Lineman	180.00
George Mitchell, 3159 Emerald Ave., Lineman, 16 days	76.61
Peter Hart, 348 W. 30th St., Lineman	130.00
Nicholas Martin, 350 W. 30th Pl., Lineman, 16 days	76.61
R. T. Kelly, 2912 Lowe Ave., Asst. Repairman	145.00
P. L. Englert, 3038 Wallace St., Lineman	130.00

Temporary Inside Maintenance and Construction Division.

Thos. Sheehan, 2476 Albany Ave., Repairman	170.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	170.00
H. J. O'Connell, 6157 Michigan Ave., Asst. Repairman, 15 days	80.00
H. C. Peterson, 4448 Monticello Ave., 8 days	37.14
Total	$ 34,086.85
Grand Total	$ 88,563.82

ADJOURNMENT.

Mr. Nance moved that the Board adjourn.

The motion prevailed.

John W. Gillen. Clerk.

628.09773
C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, JUNE 12, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were—

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the proceedings of the regular meeting of May 29, 1919, be approved, as printed, without being read.

Mr. Nance moved that the minutes of the proceedings of the regular meeting of May 29, 1919, be amended by striking out the period in line nineteen of the second column on page 642 thereof and inserting in lieu thereof the following: "Inviting the Chicago Bureau of

Public Efficiency to make an investigation of the affairs of The Sanitary District of Chicago," so that the amended sentence will read:

"Mr. Nance presented a resolution inviting the Chicago Bureau of Public Efficiency to make an investigation of the affairs of The Sanitary District of Chicago."

Mr. Lawley moved, as a substitute for the amendment, that it be referred to the Committee on Judiciary.

On roll call the substitute for the amendment was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

Mr. Nance moved that the minutes of the Proceedings of the regular meeting of May 29, 1919, be amended by striking out the period in line thirty-six of the second column of page 642 thereof and inserting in lieu thereof the following: "directing the Clerk of the Sanitary District to publish the monthly pay rolls," so that the amended sentence will read:

"Mr. Nance presented an order directing the Clerk of the Sanitary District to publish the monthly pay rolls."

Mr. Lawley moved, as a substitute, for the amendment, that it be referred to the Committee on Finance.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

Mr. Lawley renewed his motion to approve the minutes of the proceedings of the regular meeting of May 29, 1919, as printed, without being read.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance—Two.

REPORTS OF OFFICERS.

The Clerk presented his report of money received and deposited with the Treasurer during the month of May, 1919, which was ordered published and filed, as follows:

CHICAGO, June 12, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of five hundred ninety-five thousand two hundred sixty-nine and thirty-four hundredths ($595,269.34) dollars during the month of May, 1919, from the following sources:

Harry R. Gibbons, County Collector—		
Account of 1917 taxes	$298,342.57	
Account of 1918 taxes	201,657.43	
		$500,000.00
Alfred Popp, Collector, Town of Proviso, account 1918 taxes		8,915.17
The Albert Dickinson Company—		
Payment of fourth installment due April 1, 1919, for constructing pile and timber dock	$ 3,071.34	
Interest on balance of principal	2,610.64	
		5,681.98
International Harvester Company, in payment of 1918 taxes on District property occupied by them		4,580.10

Thomas P. Garland, amount of warrant No. 93487, covering voucher of same number in favor of Thomas P. Garland, deposited to the credit of The Sanitary District of Chicago, and to the account of Thomas P. Garland to satisfy claims of certain persons who seek to enforce liens which they claim to have against the money in the hands of The Sanitary District of Chicago due Thomas P. Garland. On April 30, 1919, a decree was entered allowing certain claims. Payment of same being authorized by the Board of Trustees May 8, 1919 ..... 3,621.61

Nessen Warehousing Company, in payment of 1918 taxes on District property leased by them 1,443.53

United States Crushed Stone Company, in payment of judgment note due May 1, 1919 ..... 333.33

Harry R. Gibbons, County Treasurer, amount received being refund of taxes for year 1917, on property leased to the Peoples Gas Light & Coke Company, they having paid the taxes 315.91

A. J. Rosenow, in payment for police boat Illinois 125.00

Wm. L. Corris, for deposit of warrant No. 98955 ..... 120.25

The Texas Company, in payment of 1915, 1916 and 1917 taxes on District property leased by them 107.96

Corn Products Company, in payment of 1917 taxes and redemption on District property leased by them 59.09

Corn Products Company, in payment of 1918 taxes on District property leased by them 33.20

Great Lakes Dredge & Dock Company, in payment of 1918 taxes on District property leased by the Western Quarries Company 31.72

The Texas Company, in payment of 1918 taxes on District property leased by them 22.29

Joseph Rosenthal, president of Chicago Law Institute, for deposit of warrant No. 100290 ..... 14.00

Illinois Northern Railway, for semi-annual rental to October 1, 1919, for land along Main Channel 664.50

The Peoples Gas Light & Coke Company, for semi-annual rental from May 1, 1919, to October 31, 1919, for premises along Main Channel 418.13

Van Fleet Shops, being rental for months of August and September, 1918, for premises located at No. 1 Jefferson street, Joliet, Ill. 150 00

Sundry consumers, for electric power and light ..... $ 56,678.10

Commissioners of Lincoln Park—

For power and light for March, 1919	$3,726.69	
Interest and depreciation for March, 1919	69.45	
		3,796.14

West Chicago Park Commissioners—

For power and light for March, 1919	$1,139.97	
Interest and depreciation for March, 1919	112.14	
		1,252.11

Village of Forest Park—

For power and light for November and December, 1918	$1,067.26	
Interest and depreciation for November and December, 1918	130.95	
		1,198.21

State of Illinois, for power and light for December, 1918, and March, 1919		890.75
Village of Dolton—		
For power and light for March, 1919	$ 584.67	
Interest and depreciation for March, 1919	18.65	
		603.32
Village of Maywood—		
For power and light for April, 1919	$ 514.22	
Interest and depreciation for April, 1919	44.65	
		558.87
Town of Cicero, for power and light for March, 1919		499.80
Village of Summit—		
For power and light for March, 1919	$ 357.91	
Interest and depreciation for March, 1919	32.98	
		390.89
Village of Evergreen Park—		
For power and light for April, 1919	$ 194.19	
Interest and depreciation for April, 1919	26.87	
		221.06
City of Blue Island—		
For power and light for March, 1919	$ 73.13	
Interest and depreciation for March, 1919	90.78	
		163.91
Village of Wilmette, for power and light for March, 1919		126.90
Village of Bellewood—		
For power and light for April, 1919	$ 60.36	
Interest and depreciation for April, 1919	24.61	
		84.97
Village of Lyons, for power and light for March and April, 1919		64.58
Village of Stickney, for power and light for March, 1919		12.28
Wilmette Park District, interest and depreciation for March and April, 1919		10.00
Blue Island Public Library, for power and light for March, 1919		3.79
Eastern Metal Refining Company, for sale of scrap materials per authority Board of Trustees, May 22, 1919, page 587 of Proceedings		1,696.01
Village of Maywood, to cover cost of moving fifteen poles on Madison street		165.74
Sundry power, consumers, rental of meters for May, 1919		130.00
Weller Mfg. Company, to cover cost of changing meter loops		52.29
F. Westerberg, refund of amount overpaid		14.50
Jas. J. Finneran, account of personal telephone calls		7.00
O. F. Sweet, installation of service		1.50
R. Smith, installation of service		1.50
L. E. Bales, installation of service		1.50
P. Kricks, installation of service		1.50
J. B. Campbell, installation of service		1.50
J. Bradshaw, installation of service		1.50

Isabelle Ward, account of personal telephone calls	1.00	
R. W. Faupell, account of personal telephone calls	.35	
		68,631.57
Grand Total		$595,269.34

Very truly yours,

JOHN MCGILLEN,
Clerk of the District.
CHICAGO, June 12, 1919.

$595,269.34.

Received from John McGillen, Clerk, the sum of five hundred ninety-five thousand two hundred and sixty-nine and thirty-four hundredths ($595,269.34) dollars, on the dates and in amounts as follows:

May 1		$ 425.61
May 2		1,177.24
May 3		500,000.00
May 5		124.18
May 6		439.79
May 7		875.68
May 8		1,151.07
May 9		5,324.54
May 10		124.09
May 12		3,926.31
May 13		1,073.89
May 14		4,603.98
May 15		2,540.89
May 16		3,858.46
May 17		7,105.37
May 19		4,635.46
May 20		16,613.69
May 21		6,085.52
May 22		5,636.71
May 23		411.67
May 24		7,493.35
May 26	$8,915.17	
May 26	641.92	
		9,557.09
May 27		111.18
May 28		133.19
May 29		7,438.17
May 31		4,402.21
Total		$595,269.34

to be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

County Collector	$500,000.00
Electrical Department Working Capital	68,631.57
Alfred Popp, Collector, Town of Proviso	8,915.17
Taxes on District property	6,593.80
The Albert Dickinson Company	5,681.98
Thomas P. Garland	3,621.61
Land Revenue	1,232.63
Bills Receivable (United States Crushed Stone Co.)	333.33
Police Department	125.00
General Account	120.25
Law Department	14.00
Total	$595,269.34

GEO. M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The Clerk presented the following report in regard to the ordinance passed for the levy of taxes for the fiscal year ending December 31, 1919, which was ordered published and filed:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—On April 24, 1919 (page 354 of the Proceedings), your Honorable Body passed an ordinance for the levy of taxes for the fiscal year ending December 31, 1919.

By Section 2 of said ordinance, the Clerk was directed to file with the County Clerk of Cook County a certified copy of said ordinance and was also directed to cause said ordinance to be published at least once in a newspaper published within the territorial limits of the Sanitary District and to incur the necessary expense therefor.

I respectfully report that I caused said ordinance to be duly published in the Chicago Evening Post and other daily secular newspapers of general circulation within the limits of the Sanitary District, as is evidenced by a certificate of publication from the said Chicago Evening Post, which is hereto attached.

It was also published in every other Chicago daily printed in the English language.

I further report that I caused a certified copy of said ordinance to be made and filed the same with Robert M. Sweitzer, County Clerk of Cook County, as is shown by his receipt of same hereto attached.

I respectfully suggest that said documents be made a matter of record by the Sanitary District.

Respectfully submitted,

JOHN MCGILLEN,
Clerk.

STATE OF ILLINOIS }
COUNTY OF COOK. } ss.

JOHN E. HOGAN, of the City of Chicago, County of Cook and State of Illinois, being duly sworn, on oath says and certifies that he is Assistant Secretary of the Chicago Evening Post Company, a corporation, and the agent duly authorized to make this affidavit and certificate for the said corporation; that the said corporation is the publisher of the Chicago Evening Post, a daily, secular newspaper regularly issued and of general circulation in said city or county; that the notice of The Sanitary District of Chicago, of which the annexed is a true copy, was printed and published in the regular edition and issue of the Chicago Evening Post for two times, to-wit, April 29 and 30, A. D. 1919.; that the date of the first paper containing the same was the 29th day of April, A. D. 1919; and that the date of the last paper containing the same was the 30th day of April, A. D. 1919, and that said newspaper had been regularly published in the City of Chicago, in the County and State aforesaid, for at least six (6) months prior to the first publication of said notice.

Dated at Chicago, Illinois, this 30th day of April, A. D. 1919.

(Signed) JOHN E. HOGAN.

Subscribed and sworn to before me this 30th day of April, A. D. 1919.

(Signed) TIMOTHY F. RYAN,
(Seal) *Notary Public.*

(Copy of an ordinance for the levy of taxes for the fiscal year ending December 31, 1919, certified by the Clerk of The Sanitary District of Chicago, attached to above certificate.)

Received of The Sanitary District of Chicago this 6th day of May, A. D. 1919, a certified copy of "An Ordinance for the Levying of taxes for the fiscal year ending December 31, A. D. 1919," passed by the Board of Trustees of The Sani-

tary District of Chicago, at a regular meeting held on April 24, A. D. 1919.

(Signed) ROBERT M. SWEITZER,
County Clerk of Cook County.

The Clerk presented the annual report of the Clerical Department for the year 1918, which was ordered published and filed, as follows:

CHICAGO, June 11, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I submit herewith the annual report for the year ended December 31, 1918, together with complete statements of the financial condition of the District.

The amount of cash received, for the year 1918, was $9,482,287.63, included therein, being the proceeds from sale of bonds of the thirteenth issue, with accumulated interest, amount $55,642.60, this issue of bonds being dated April 25, 1917, as authorized by the Board of Trustees on March 22, 1917 (pages 492 to 496 of Proceedings), also the proceeds from the sale of bonds of the thirty-first issue, with accumulated interest, amount $1,939,752.84, dated July 1, 1918, as authorized by the Board of Trustees, on June 25, 1918 (pages 493 to 495 of Proceedings), and also the proceeds from the sale of Anticipation Tax Warrants (issued against tax levy of 1918), in amount of $3,000.000.00, same being dated October 15, 1918, and payable July 15, 1919, these warrants being authorized by the Board of Trustees October 17, 1918 (pages 1973 to 1975 of Proceedings).

In connection with the bonds of the thirtieth and thirty-first issues I beg to report that there still remains unsold $57,000.00 worth of bonds of the thirtieth issue and $41,000.00 worth of bonds of the thirty-first issue, same being in the hands of the Treasurer of The Sanitary District of Chicago. The expenditures for the same period were $10,110,645.23; of this amount $2,542,310.00 was for maturing bonds ($1,916,000.00 and interest ($626,310.00) and $2,571,111.11 for the redemption of the Anticipation Tax Warrants, amount $2,500,000.00, issued in 1917 against the tax levy of 1917 and interest thereon. The excess of expenditures over income received in 1918 was made possible by having a balance on hand January 1, 1918, of $1,782,187.34.

The net receipts from the organization of the District to December 31, 1918, amount to $105,706,600.39 and the net expenditures total $99,267,619.03, the difference $6,438,981.36 being the amount of cash on hand and the amount due from various sources, as shown on statement, "Summary of net receipts and expenditures" attached hereto, the principal amount being the City of Chicago judgment account of $5,030,052.19, for which amount the City of Chicago is issuing bonds to pay the same.

Total bond issued from organization of December 31, 1918, was $46,140,000.00, those redeemed amount to $31,167,000.00, leaving $14,973,000.00 of bonds outstanding. Bond statement showing amount issued from organization to December 31, 1918, and amount outstanding as of January 1, 1919, also amount of principal and interest maturing to January 1, 1920, is attached herewith.

The tax collections for the year 1918 amounted to $3,660,836.65, making an aggregate of taxes collected from organization to December 31, 1918, of $80,563,455.12.

A statement of property valuations, rates and tax collections from organization is transmitted herewith.

Respectfully submitted,
JOHN MCGILLEN,
Clerk.

Correct:
GEORGE J. MILLER,
General Accountant.

THE SANITARY DISTRICT OF CHICAGO

Yearly Statement of Assessed Valuations, Rates and Collections of Taxes from Organization to December 31, 1918

Year	Assessed Valuation	Rate of Taxation Per $100.00	Tax Collections
1890	$ 217,458,360	$0.414	
1891	254,011.212	.414	$ 957,260.78
1892	241,369.737	.50	1,022,349.75
1893	242,438,304	.50	1,167,097.26
1894	244,253,105	.50	1,148,607.21
1895	240,144,952	1.50	1,173,750.05
1896	241,324.319	1.50	3,471,053.90
1897	229,485,977	1.50	3,458,812.53
1898	218,299,977	1.50	3,254,436.92
1899	338,674,447	1.50	3,095,340.14
1900	269,287,109	.50	3,878,217.63
1901	365,172,502	.368	1,304,737.67
1902	393,080,042	.475	1,323,690.41
1903	431,035,443	.689*	1,779,320.35
1904	422,737,932	.705*	2,826,949.12
1905	428,179,108	.725*	2,865,815.50
1906	447,330,771	.475	2,960,826.83
1907	499,727,415	.47	2,047,399.60
1908	499,795,171	.68	2,346,161.28
1909	871,650,506	.29	3,264,932.43
1910	889,831,089	.34	2,405,892.19
1911	970,372,159	.71	2,901,752.87
1912	984,479,698	.49	6,516,437.10
1913	1,034,122,165	.52	4,620,171.67
1914	1,055,732,894	.48	5,106,400.55
1915	1,098,037,554	.42	4,517,680.88
1916	1,091,534,551	.38	3,443,287.69
1917	1,124,772,533	.35	4,044,236.16
1918	1,145,619,326	.40	3,660,836.65
			$80,563,455.12

* These items include an extra tax of $0.25 per $100.00 authorized for development of water power. Amount collected, $3,056,624.55.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received requests from the Illinois Valley Engineer and Real Estate Agent to make transfer of funds from various unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which no appropriation has been made and to increase certain appropriations.

Your Committee having considered the matter, is of the opinion that the requests should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be and he is hereby authorized and directed to make

THE SANITARY DISTRICT OF CHICAGO.

Summary of Cash Receipts and Expenditures for the Year ending December 31, 1918.

Receipts.

Balance on hand January 1, 1918		$ 1,782,187.34
Taxes collected from tax levy of year 1917, from amount held in escrow on tax levy of year 1916 and from delinquent taxes from tax levy of year 1915 and prior years	$ 3,660,836.65	
Proceeds from sale of anticipation tax warrants (issued against tax levy of year 1918)	3,000,000.00	
Proceeds from sales of 1959 bonds of the thirty-first issue, dated July 1, 1918	1,935,589.95	
Accumulated interest on 1959 bonds of the thirty-first issue sold	4,162.89	
Proceeds from sale of 57 bonds of the thirtieth issue	54,769.59	
Accumulated interest on 57 bonds of the thirtieth issue sold	873.01	
Accumulated interest on bonds of the thirtieth issue remaining unsold	3,080.00	
Interest account	30,102.87	
Electrical Department, from sale of electric power, etc.	711,145.47	
Land revenue	44,225.26	
From sundry tenants for rental of District property	$ 41,329.30	
From Western Stone Co., for sale of stone	2,728.10	
*From Atchison, Topeka & Santa Fe Ry. Co., for sale of stone	167.86	
Taxes on District property collected from sundry tenants	4,927.75	
Bills receivable	5,893.97	
From United States Crushed Stone Co., in payment for judgment notes, account electric energy furnished them	$ 3,333.34	
From Lemont Limestone Co., payment of 41% of judgment note for land rental and stone purchased	2,560.63	
Water service, from sundry tenants for rental of pipe lines to draw water for use for condensing purposes	16,437.00	
The Albert Dickinson Co., for third installment of cost for constructing dock along channel front of property leased from the District	3,071.34	
Commissioners of Lincoln Park, for labor and material expended making topographical survey of Lincoln Park	2,634.33	
James O. Heyworth, for services of inspector furnished at gravel pit	992.61	
Sale of old equipment, purchase of pumping plant located on Contract Section No. 4, by James O. Heyworth	1,350.00	
James M. Dailey, Chairman Committee on Finance, for return of emergency fund	1,500.00	
Refunds and miscellaneous sources	694.94	
Total receipts		9,482,287.63
		$11,264,474.97

Expenditures.

Bonds retired			$ 1,916,000.00
Interest on bonds			626,310.00
Anticipation tax warrants redeemed			2,500,000.00
Interest on anticipation tax warrants			71,111.11
Electrical Department			699,479.08
Right of way, improvements, channel and bridge construction		$ 1,569,812.00	
Chicago river, south branch	$554,187.81		
Chicago river, north branch	.30		
Main channel	595.25		
North Shore channel	26,737.30		
Calumet-Sag channel	988,291.34		
Special construction work		15,268.01	
Conduits and sewer outfalls construction		1,547,765.41	
Pumping stations (grounds, buildings and equipment)		122,915.80	
Sanitary improvements, sewage and special investigations and experiments (grounds, buildings and equipment)		3,710.45	
Miscellaneous structures, etc., and equipment (grounds, buildings and equipment)		3,827.13	
Maintenance and operation		539,504.31	
River, channel, bridges, etc.	$138,751.29		
Conduits and sewer outfalls	13.60		
Pumping stations	306,422.42		
Miscellaneous structures, etc., and equipment	3,329.07		
Sanitary improvements, sewage and special investigations and experiments	34,466.35		
Miscellaneous engineering operating expense	56,521.58		
Total expenditures account Engineering Department			3,802,803.11
Other departmental expenditures			491,941.93
Illinois and Michigan Canal and Illinois River Conditions Department		$ 27,290.47	
Law Department		187,798.65	
Departmental, general law suits and judgments	$137,293.44		
Land damages (suits, settlements and judgments)	50,505.21		
Clerical Department		32,763.73	
Treasury Department		2,505.42	
Real Estate Department		24,603.67	
Departmental expenditures	$ 10,063.52		
Taxes on District property	14,540.15		
Police Department		75,780.29	
General Account		144,199.70	
Total expenditures			10,110,645.23
Balance on hand			*1,153,829.74
			$11,264,474.97

*Adding to this balance of $1,153,829.74 the sum of $606,992.55, being the amount of outstanding warrants not yet presented to the Treasurer for payment, we have the sum of $1,760,822.29, which was the cash balance in the hands of the Treasurer on December 31, 1918, as shown by his report for the month of December, 1918 (pages 53 and 54 of the Proceedings for 1919).

THE SANITARY DISTRICT OF CHICAGO.

Summary of Net Receipts and Expenditures from Organization to December 31, 1918.

Receipts.

Taxes collected		$ 80,563,455.12
Bond Account		14,875,000.00
Ninth issue	$ 50,000.00	
Tenth issue	100,000.00	
Eleventh issue	250,000.00	
Twelfth issue	300,000.00	
Thirteenth issue	300,000.00	
Fourteenth issue	375,000.00	
Fifteenth issue	375,000.00	
Sixteenth issue	656,000.00	
Seventeenth issue	192,000.00	
Eighteenth issue	192,000.00	
Nineteenth issue	220,000.00	
Twentieth issue	440,000.00	
Twenty-second issue	880,000.00	
Twenty-third issue	496,000.00	
Twenty-fourth issue	1,375,000.00	
Twenty-fifth issue	300,000.00	
Twenty-sixth issue	636,000.00	
Twenty-seventh issue	636,000.00	
Twenty-eighth issue	650,000.00	
Twenty-ninth issue	1,700,000.00	
Thirtieth issue	$2,850,000.00	
Less amount unsold	57,000.00	
	2,793,000.00	
Thirty-first issue	$2,000,000.00	
Less amount unsold	41,000.00	
	1,959,000.00	
Anticipation tax warrants outstanding (against 1918 tax levy)		3,000,000.00
Interest		1,264,996.35
Bank balances	$ 616,234.83	
Loans	515,530.18	
Deferred Payments	133,131.34	
Land revenue		942,690.91
Water service		118,012.69
Rental of machinery and tools		1,176.05
Electrical Department—		
Working capital	$ 279,849.69	
Replacement funds	1,214,962.84	
Interest on investment	$1,512,443.89	
Interest on loans	5,072.38	
Interest during construction	282,291.49	
	1,799,807.76	
Profits transferred	602,298.47	
Earnings invested in plant	1,031,031.37	
		4,930,950.13
Byrne Bros. Dredging & Engineering Co., deposit account		2,500.00
S. King		2,500.00
Village of Glencoe		5,000.00
Suspense account (Engineering Department)		319.14
		$105,706,600.39

Expenditures.

Interest on bonds	$16,185,788.00	
Interest on tax warrants	556,515.42	
		$ 16,742,303.42
Discount and interest on loans		25,004.67
Interest on Electrial Department replacement funds in hands of the Clerk		179,992.50
Electrical Department, capital investment		4,448,710.49
Chicago river, south branch (right of way, improvements and bridge construction)	$12,253,063.47	
Chicago river, north branch (right of way, improvements and bridge construction)	430,859.28	
Main channel and river diversion (right of way, channel and bridge construction)	29,119,489.45	
Main channel	$24,360,480.95	
Main channel extension	2,451,758.91	
Desplaines river diversion	1,446,648.35	
Engineering construction expense	860,601.24	
Controlling works and Joliet project (right of way and construction)	2,839,317.26	
Controlling works at Lockport	$ 340,716.73	
Desplaines river improvement (Joliet project)	2,336,769.83	
Engineering construction expense	161,830.70	
North shore channel (right of way, channel and bridge construction)	3,286,595.67	
Calumet-Sag channel (right of way, channel and bridge construction and controlling works)	11,446,580.20	
Total cost of right of way, improvements channel and bridge construction work	$59,375,905.33	
Special construction work	$ 169,210.30	
Conduits and sewer outfalls (right of way and construction)	5,044,696.39	
Sewage treatment plants (grounds, buildings and equipment)	28,650.54	
Pumping stations (grounds, buildings and equipment)	1,312,058.03	
Miscellaneous structures, etc., and equipment (grounds, buildings, utility equipment, machinery and tools)	116,794.82	
Sanitary improvements, sewage and special investigations and experiments (grounds, buildings and equipment)	97,667.94	
Miscellaneous engineering construction expense	823,264.89	
Maintenance and operation expenditures	3,503,320.30	
River, channel and bridges	$ 1,380,547.38	
Conduits and sewer outfalls	21,553.64	
Pumping stations	1,653,012.68	
Miscellaneous structures, etc., and equipment	23,678.16	
Miscellaneous engineering operating expense	247,766.36	
Sanitary improvements, sewage and special investigations and experiments	176,762.08	
Total expenditures account Engineering Department		70,471,568.54
Illinois and Michigan Canal and Illinois River Conditions Department		601,121.36
Law Department		2,438,746.12
Land Damages		569,128.23
Clerical Department		427,397.74
Treasury Department		75,347.72
Real Estate Department		385,419.57
Departmental expenditures	$ 135,826.20	
Taxes on District property	249,593.37	
Police Department		774,254.58
General Account		2,110,571.92
Commission on Sewage Disposal and Water Power Development		18,052.17
Total expenditures		$ 99,267,619.03
Due from—		
Frank E. Healey, Contract Section 7, North Shore Channel	$ 29,837.77	
John M. Ewen Company	3,643.00	
Joseph J. Duffy	94,069.78	
State of Illinois	1,821.27	
Western Stone Company	4,145.51	
Great Lakes Dredge & Dock Company	7,499.97	
Stanley M. Grigg	5.75	
Village of Winnetka	46.00	
T. J. Forschner Contracting Company	3,045.23	
Chicago Bridge & Iron Works	337.89	
Ketler, Elliott Erection Company	79.96	
Western Quarries Company	1,404.94	
Stock Yards Industries, C. A. Alling, Chairman	6,724.76	
Byrne Bros. Dredging & Engineering Company	540.00	
The Albert Dickinson Company, Deferred Payment Account	52,212.78	
		205,414.61
Securities, Judgments and Notes—		
United States Crushed Stone Company, Bills Receivable	$ 16,000.00	
Lemont Limestone Company, Bills Receivable	3,684.82	
City of Berwyn, Electric Light Bonds	10,000.00	
City of Chicago, Judgment Account	5,030,052.19	
		5,059,737.01
Emergency Funds in hands of John McGillen, Clerk		20,000.00
Balance in hand December 31, 1918		1,153,829.74
		$105,706,600.39

ue 5.	Amount of Interest Due December 1, 1919.	Amount of Principal Due December 1, 1919.	Amount of Interest Due January 1, 1920.	Amount of Principal Due January 1, 1920.	Amount Outstanding January 2, 1920.
Fi	.....	.....	.....	.....	.....
Se	.....	.....	.....	.....	.....
Ti	.....	.....	.....	.....	.....
Fo	.....	.....	.....	.....	.....
Fi	.....	.....	.....	.....	.....
Si	.....	.....	.....	.....	.....
Se	.....	.....	.....	.....	.....
Ei	.....	.....	.....	.....	.....
Ni	.....	.....	$ 1,000.00	$ 50,000.00	.....
Te	.....	.....	1,000.00	.....	$ 50,000.00
El	.....	.....	.....	.....	125,000.00
Ti	.....	.....	6,000.00	100,000.00	200,000.00
Ti	$ 6,000.00	$ 75,000.00	.....	.....	225,000.00
Fo	.....	.....	6,000.00	.....	300,000.00
Fi	7,500.00	75,000.00	.....	.....	300,000.00
Si	.....	.....	.....	.....	544,000.00
Se	.....	.....	.....	.....	164,000.00
Ei	.....	.....	3,840.00	28,000.00	164,000.00
Ni	.....	.....	.....	.....	192,000.00
Te	.....	.....	.....	.....	384,000.00
Ti	.....	.....	.....	.....	.....
Ti	17,600.00	112,000.00	.....	.....	768,000.00
Ti	9,920.00	56,000.00	.....	.....	440,000.00
Ti	27,500.00	125,000.00	.....	.....	1,250,000.00
Ti	.....	.....	5,500.00	.....	275,000.00
Ti	.....	.....	.....	.....	583,000.00
Ti	.....	.....	12,720.00	53,000.00	583,000.00
Ti	.....	.....	.....	.....	600,000.00
Ti	34,000.00	100,000.00	.....	.....	1,600,000.00
Ti	.....	.....	.....	.....	2,700,000.00
Ti	.....	.....	45,000.00	.....	2,000,000.00
00	$102,520.00	$543,000.00	$81,060.00	$231,000.00	$13,447,000.00

THE SANITARY DISTRICT OF CHICAGO

Bond Sinking Fund Requirements and Maturities of Bonds Issued and Unissued as of January 1, 1920

Issues	Date of Issues	Amount of Issue	Date of First Payment of Principal	Amount outstanding January 2, 1914	Rate of Interest	Amount of Interest Due January 1, 1920	Amount of Principal Due February 1, 1919.	Amount of Interest Due March 1, 1919.	Amount of Interest Due March 15, 1919.	Amount of Principal Due March 15, 1919.	Amount of Interest Due April 1, 1919.	Amount of Interest Due April 25, 1919.	Amount of Principal Due April 25, 1919.	Amount of Interest Due June 1, 1919.	Amount of Interest Due July 1, 1919.	Amount of Principal Due July 1, 1919.	Amount of Interest Due August 1, 1919.	Amount of Interest Due September 1, 1919.	Amount of Principal Due September 1, 1919.	Amount of Interest Due September 15, 1919.	Amount of Interest Due October 1, 1919.	Amount of Principal Due October 1, 1919.	Amount of Interest Due October 25, 1919.	Amount of Interest Due December 1, 1919.	Amount of Principal Due December 1, 1919.	Amount of Interest Due January 1, 1920.	Amount of Principal Due January 1, 1920.	Amount outstanding January 2, 1920
First	Nov. 1, 1892	$ 2,000,000.00	Nov. 1, 1893		5 per cent																							
Second	Jan. 1, 1894	3,000,000.00	Jan. 1, 1895		5 per cent																							
Third	Aug. 1, 1894	3,000,000.00	July 1, 1895		5 per cent																							
Fourth	Feb. 1, 1895	4,000,000.00	Jan. 1, 1898		4½ per cent																							
Fifth	Feb. 1, 1896	800,000.00	Jan. 1, 1897		4½ per cent																							
Sixth	Jan. 15, 1897	800,000.00	Jan. 1, 1898		4½ per cent																							
Seventh	July 1, 1898	200,000.00	June 30, 1918		3½ per cent																							
Eighth	Jan. 2, 1899	190,000.00	Jan. 1, 1919		3½ per cent																							
Ninth	Jan. 1, 1900	1,000,000.00	Jan. 1, 1901	$ 50,000.00	4 per cent																							
Tenth	July 1, 1900	1,000,000.00	July 1, 1901	100,000.00	4 per cent																							
Eleventh	Oct. 1, 1900	2,575,000.00	Apr. 1, 1902	250,000.00	4 per cent																							
Twelfth	Jan. 1, 1902	2,000,000.00	Jan. 1, 1903	200,000.00	4 per cent																							
Thirteenth	Dec. 1, 1902	1,500,000.00	Dec. 1, 1903	300,000.00	4 per cent																							
Fourteenth	July 1, 1903	1,500,000.00	July 1, 1904	375,000.00	4 per cent																							
Fifteenth	Dec. 1, 1903	1,425,000.00	Dec. 1, 1905	375,000.00	4 per cent																							
Sixteenth	Mar. 15, 1905	2,000,000.00	Mar. 15, 1907	656,000.00	4 per cent																							
Seventeenth	Oct. 1, 1906	500,000.00	Oct. 1, 1908	192,000.00	4 per cent																							
Eighteenth	Jan. 2, 1907	500,000.00	Jan. 2, 1909	192,000.00	4 per cent																							
Nineteenth	Feb. 1, 1907	500,000.00	Feb. 1, 1909	224,000.00	4 per cent																							
Twentieth	Sept. 1, 1907	1,000,000.00	Sept. 1, 1908	440,000.00	4 per cent																							
Twenty-first	Oct. 15, 1907	850,000.00	Oct. 1, 1909	340,000.00	4 per cent																							
Twenty-second	Dec. 1, 1907	2,000,000.00	Dec. 1, 1909	880,000.00	4 per cent									17,600.00											17,600.00	112,000.00		768,000.00
Twenty-third	Dec. 1, 1908	1,000,000.00	Dec. 1, 1910	440,000.00	4 per cent																					20,000.00		440,000.00
Twenty-fourth	Dec. 1, 1909	2,500,000.00	Dec. 1, 1911	1,075,000.00	4 per cent																							
Twenty-fifth	July 1, 1910	500,000.00	July 1, 1911	200,000.00	4 per cent																							
Twenty-sixth	Oct. 1, 1910	1,000,000.00	Oct. 1, 1912	425,000.00	4 per cent																							
Twenty-seventh	Jan. 1, 1911	1,000,000.00	Jan. 1, 1913	400,000.00	4 per cent																							
Twenty-eighth	Sept. 1, 1911	1,000,000.00	Sept. 1, 1912	400,000.00	4 per cent																							
Twenty-ninth	Dec. 1, 1915	2,000,000.00	Dec. 1, 1917	1,760,000.00	4 per cent									34,000.00											34,000.00	100,000.00		1,600,000.00
Thirtieth	April 25, 1917	3,000,000.00	April 1, 1918	2,850,000.00	4 per cent																							2,750,000.00
Thirty-first	July 1, 1918	2,000,000.00	July 1, 1919	2,000,000.00	4½ per cent																							1,900,000.00
TOTALS		$46,140,000.00		$11,973,000.00		$4,400.00	$28,000.00	$21,800.00	$13,120.00	$112,000.00	$21,560.00	$57,000.00	$150,000.00	$102,520.00	$84,060.00	$150,000.00	$3,810.00	$21,800.00	$106,000.00	$10,880.00	$21,560.00	$206,000.00	$55,000.00	$102,520.00	$543,000.00	$81,060.00	$231,000.00	$13,447,000.00

Schedule of Principal and Interest Payments

Amount of principal and interest due February 1, 1919	$ 32,400.00
Amount of interest due March 1, 1919	21,800.00
Amount of principal and interest due March 15, 1919	125,120.00
Amount of principal and interest due April 25, 1919	207,000.00
Amount of principal and interest due July 1, 1919	234,060.00
Amount of principal and interest due September 1, 1919	127,880.00
Amount of interest due September 15, 1919	10,880.00
Amount of principal and interest due October 1, 1919	227,560.00
Amount of principal and interest due January 1, 1920	312,000.00
Total Amount of Principal and Interest Due to January 1, 1920	$2,127,120.00
Total bonds outstanding March 15, 1919	14,833,000.00
Total bonds outstanding September 1, 1919	11,127,000.00

the following transfer in appropriations for the year 1919, in accordance with the several requests of the heads of the departments attached hereto.

Department of Illinois and Michigan Canal and Illinois River Conditions.

From Account No. 3-211, transportation of persons, $25.00, to the following account:

No. 3-213. Transportation, freight and express $25.00

From Account No. 3-311, office supplies, $100.00, to the following account:

No. 3-321. Coal and wood.$50.00
No. 3-404. Lumber 50.00
———$100.00

From Account No. 3-4023, cable wire, $5.00, to the following account:

No. 3-4024. Chain $5.00

From Account No. 3-455, electric parts, $20.00, to the following account:

No 3-453. Castings and forgings.$20.00

From Account No. 3-53, furniture, etc., $50.00, to the following account:

No. 3-516. Heating and ventilating equipment $50.00

From Account No. 3-99, contingencies, $100.00, to the following account:

No. 3-321. Coal and wood.....$100.00

Department of Real Estate.

From Account No. 7-24, advertising, $26.00, to the following account:

No. 7-233. Printing and engraving $10.00
No. 7-831. Fire insurance... 16.00
———$26.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (pages 114-115 of the Proceedings), sets up under Item 4, Record Division of the Engineering Department, one position with a salary attached thereto of $1,560.00, and under Item 5 of said division, four positions with salaries attached thereto totalling the sum of $5,760.00, and under Item 7 of the Sanitary Division, two positions with salaries attached thereto totaling the sum of $4,800.00, and under Item 4, under Channel Construction Division, five positions with salaries attached thereto totaling the sum of $7,800.00, and under Item 5, Outlet and Intercepting Sewer Construction division, four positions with salaries attached thereto totaling the sum of $7,200.00, making a grand total of $27,120.00, which positions and salaries are set forth in the order hereto attached.

Your Committee further reports that the Committee on Employment has requested that the salaries attached to certain of said positions be adjusted and that other positions be created to meet the requirements of the Engineering Department, which can be done without increasing the total sums theretofore appropriated.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk be and he is

hereby authorized and directed to make adjustments of the positions and salaries set up under the items in the divisions of the Engineering Department above specified in the appropriation bill for the year 1919, in accordance with the request of the Committee on Employment as follows:

DEPARTMENT OF ENGINEERING—ACCOUNT NO. II.

SALARIES AND WAGES OF REGULAR EMPLOYES.

Change from

Record Division.

Item 4.	Sub-instrument man, 1 at $1,560.00	$ 1,560.00
Item 5.	Computers, 4 at $1,440.00	5,760.00

Sanitary Division.

Item 7.	Resident Engineers, 2 at $2,400.00	4,800.00

Channel Construction Division.

Item 4.	Sub-instrument men, 5 at $1,560.00	7,800.00

Outlet and Intercepting Sewer, Construction Division.

Item 5.	Instrument men, 4 at $1,800.00	7,200.00
		$27,120.00

To

Record Division.

Sub-instrument men, 2 at $1,560.00	$ 3,120.00
Computers, 3 at $1,440.00	4,320.00
Computers, 9¼ months, 1 at $1,440.00	1,110.00

Sanitary Division.

Resident Engineers, 1 at $2,400	$ 2,400.00
Resident Engineer, 7 months, 1 at $2,400.00	1,400.00

Channel Construction Division.

Sub-instrument men, 5 at $1,560.00	7,800.00
Sub-instrument men, 7 months, 2 at $1,560.00	1,820.00

Outlet and Intercepting Sewer, Construction Division.

Instrument men, 1 at $1,800.00	1,800.00
Instrument men, 7 months, 2 at $1.800.00	2,100.00
Instrument man, 8 1/3 months, 1 at $1,800	1,250.00
	$27,120.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the advisability of constructing two new offices in the space on the floor allotted to the Law Department in accordance with certain suggestions made by the Attorney.

The Architect states that the necessary work can be performed by the Superintendent of the Building at an estimated cost of $400.00.

Your Committee having considered the matter, is of the opinion that said work should be done and therefore recommends the passage of the following order:

Ordered, That the Architect be and he is hereby authorized and directed to make the necessary arrangements with the Superintendent of the Building to perform the work specified, provided the cost of the same shall not exceed the sum of $400.00.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (page 131 of the Proceedings), sets up under Item 7, Department of Law, as adjusted on May 1, 1919, two positions with salaries attached thereto totaling the sum of $9,600.00 and one position with a salary attached thereto for ten and three-fourths months at $4,300, making a grand total of $13,900.00, which positions and salaries are set forth in the order hereto attached.

Your Committee further reports that the Committee on Employment has requested that the salaries attached to said positions be adjusted and that one other position be created to meet the requirements of the Law Department, which can be done without increasing the total sums heretofore appropriated.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk be and he is hereby authorized and directed to make adjustments of the positions and salaries set up under Item 7 in the Law Department above specified in the appropriation bill for the year 1919, in accordance with the request of the Committee on Employment, as follows:

DEPARTMENT OF LAW—ACCOUNT NO II.

SALARIES AND WAGES OF REGULAR EMPLOYES.

Change from

Assistant Attorneys, 2 at $4,800.00	$ 9,600.00
Assistant Attorney, 10¾ months, 1 at $4,800.00	4,300.00
	$13,900.00

To

Assistant Attorneys, 2 at $4,800.00	$ 9,600.00
Assistant Attorney at the rate of $400.00 a month, 1 at	3,279.18
Assistant Attorney, 1¾ months at the rate of $583.33 per month, one at	1,020.82
	$13,900.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the F. E. Newbery Electric Company with the Maryland Casualty Company thereon as surety for the faithful performance of its contract for the construction of an underground conduit system for the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the F. E. Newbery Electric Company for the construction of an underground conduit system for the Sanitary District, said bond being in the penal sum of $25,000.00, be and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract of the F. E. Newbery Electric Company with The Sanitary District of Chicago:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR UNDERGROUND CONDUIT CONSTRUCTION.

THIS AGREEMENT, Made and entered into this 22d day of May, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and F. E. Newbery Electric Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for constructing an underground conduit system as called for under the attached specifications, complete as specified.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Electrical Engineer of the Sanitary District and his properly authorized agents, by whose measurements and calculations the quantities and amounts (including extras) of the several kinds of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Electrical Engineer or other Engineer designated by the Electrical Engineer of said Sanitary District shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor, that said Electrical Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide every question which may arise relative to the execution of the work under this contract on the part of the said Contractor; and his estimate and decision shall be final and conclusive on the parties hereto, and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Electrical Engineer" or "Engineer" are used herein they shall be understood to mean the Electrical Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the words "the work" are used herein, they shall be interpreted to mean the work, including all material, labor, tools, and all appliances and appurtenances necessary to perform and complete everything specified or implied in this contract or shown on the drawings, in full compliance with all the terms and conditions hereof.

Wherever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Electrical Engineer of The Sanitary District of Chicago.

SPECIFICATIONS

FOR UNDERGROUND CONDUIT CONSTRUCTION.

Scope.

1. The work to be done under these specifications includes the furnishing of all conduit, material, labor, tools and appliances, and constructing in place, in an approved manner, complete and ready for service, an underground conduit system for electric power cables in streets and parkways in the City of Chicago. The streets and parkways in which the conduit system is to be installed are indicated on drawings forming part of these specifications. The locations of the conduit line and the manholes shown on the drawings are subject to change as conditions may require or justify.

Underground Structures.

2. Various underground structures, such as sewer, water and gas pipes and other conduit systems, are indicated on the drawings. The location and dimension of such structures where given are believed to be reasonably correct, but do not purport to be absolutely so. Such structures are indicated on the drawings for the information of the Contractor, but information so given is not to be construed as a representation that such structures will be found or encountered as plotted. Structures may also be encountered which are not indicated on the drawings. All structures encountered shall be taken care of by the Contractor at his own expense. No extras will be allowed for additional excavation or for additional expense incurred by the Contractor on account of changes made necessary due to obstructions encountered, except at the unit prices stipulated in the contract and only for actual additional conduit installed or additional manholes constructed. No change in location of conduit or manholes from the locations shown on the drawings shall be made without the consent of the Engineer or his representatives on the work.

Conduit.

3. The conduit used shall consist of the best quality, four (4) way, vitrified clay conduit, thoroughly glazed inside and outside and of a brand approved by the Engineer.

4. The ducts or holes shall be square with rounded corners and shall be not less than three and one-half (3½) inches in smallest dimension. All ducts shall be thoroughly and evenly glazed and must be free from projections or irregularities which might injure cable pulled through them.

5. Each section of conduit shall be at least three (3) feet in length except where shorter sections are necessary to fill out the run between manholes or to work around obstructions. Each section shall be free from splits, cracks or other imperfections which would impair its strength or are resisting qualities and shall be straight and true, with ends cut perpendicular to the sides. All duct holes shall be beveled at the ends. Each end of every section shall be provided with at least two (2) dowel pin holes, such holes to be approximately three-eighths (⅜) inch in diameter and located to insure accurate alignment of sections in laying. The outer walls shall be scored transversely for at least two inches at either end. In laying the conduit dowel pins of wrought or cast iron at least three and one-quarter (3¼) inches long shall be used. The dowel pins shall be provided with a shoulder at the center to prevent the pin from slipping entirely into the dowel pin hole of the conduit section.

Concrete Encasement.

6. The conduit shall be laid with a three (3) inch encasement of concrete around same, the concrete to consist of a mixture of one (1) volume of cement, three (3) volumes of sand, and five (5) volumes of crushed stone or washed gravel. The sand and stone or gravel shall be so graded in size that the cement shall more than fill the voids in the sand, and the sand and cement shall more than fill the voids in the stone or gravel. One bag of cement, weighing at least ninety-four (94) pounds net shall be regarded as having a volume of one (1) cubic foot, and the sand and stone or gravel shall be measured loose.

7. The cement shall be first-class Portland cement of a brand approved by the Engineer and shall be delivered in bags and thoroughly protected from dampness until used. No damaged or lumpy cement shall be used, and all cement rejected or unfit for use shall be immediately removed from the work. The cement shall conform to the most recent standard specifications of the Bureau of Standards of the United States Department of Commerce, Washington, D. C., contained in Circular No. 33, issued July 1, 1913.

8. All sand used shall be clean, sharp, "Torpedo," free from soft particles, vegetable matter or other deleterious materials and shall be subject to the approval of the Engineer.

9. The crushed stone or gravel shall consist of clean, hard, durable particles of stone well graded, between one-quarter (¼) inch and three-quarter (¾) inch, and shall be free from loam, clay, organic matter, soft pebbles or other impurities. All dust and particles smaller than one-quarter inch shall be removed before stone is used.

10. All cement, sand, stone and gravel when delivered on the work

shall be deposited on flooring and kept clean until used.

11. The concrete shall be mixed on movable water-tight platforms of proper size to permit thorough manipulation or in a mixing machine of an approved type. If mixed by hand a layer of stone or gravel,, several inches thick, shall be placed on a water-tight platform and a layer of cement and sand added thereto; another layer of stone or gravel shall be added to this quantity and upon same shall be placed another layer of sand and cement, and so on, until the entire batch is deposited on the platform. The mass shall then be thoroughly mixed dry by turning not less than twice with shovels. Water shall then be added and the mass turned with shovels until completely mixed. When a mixing machine is used the material shall be mixed in the machine for least two (2) minutes.

12. The proportion of water used shall be ample to render the concrete sufficiently plastic that it will readily form a dense mass when placed in position without the necessity of tamping except to a very limited extent.

13. All concrete shall be used immediately after mixing.

Excavating.

14. All trenches for conduit shall be run on straight lines between manholes unless otherwise authorized by the Engineer. Trenches shall be of proper depth so that the minimum covering over the concrete encasement shall be not less than twenty-four (24) inches at any point and shall be properly graded to drain conduit to one of the manholes.

15. Before any concrete is placed in the trench all loose earth shall be removed or thoroughly tamped to grade.

16. No tunneling shall be done except under street car tracks and curbs or where other conduits, pipes or other unavoidable constructions are encountered.

17. The Contractor shall properly and securely support all tunneled or excavated areas and all car tracks, water and gas mains and other pipes and conduits, and he shall also do all pumping or bailing necessary to keep the excavations free from water. He shall support and backfill any tunneled or excavated area under or at street car tracks in a manner to meet the written approval of the Chicago Surface Lines or their Assignees.

18. In cutting through paved streets, sidewalks or pavement base the Contractor shall carefully keep all such paving material removed separate from the earth excavations and shall use such paving or sidewalk materials as hereinafter specified.

19. Permits for street or parkway openings will be furnished by the Sanitary District. All other permits required shall be obtained by and at the expense of the Contractor.

Foundations.

20. After all loose earth is removed from the trench or properly tamped a layer of concrete three (3) inches thick shall be laid in the bottom of the trench to form the bottom side of the concrete encasement above specified. The concrete shall be thoroughly rammed and leveled off to proper grade, pitch and working surface.

Laying Tile Ducts.

21. The tile conduit sections shall be laid upon the concrete foundation by competent workmen. The sections shall be carefully laid to proper grade so that there will be no pockets or high spots in the run between manholes and to give a total drop in the run between manholes of not less than six (6) inches so that the conduit will drain to one of the manholes. Care shall be taken to see that dowel pins are properly inserted and that the ends of adjacent sections of conduit butt squarely and form a close joint. A wrapping of burlap consisting of a strip not less than four (4) inches wide and lapping at least four (4) inches after passing around the conduit section, shall be placed to cover each joint. The burlap shall be thoroughly wet before being wrapped around the conduit and after being put in place shall be covered thoroughly with a one-half (½) inch layer of cement mortar composed of Portland cement and sand.

22. A wooden mandrel, to be approved by the Electrical Engineer or his representative, shall be used in laying the conduit in order to insure proper alignment of sections and cleaning of ducts. The mandrel shall be at least five (5) feet in length and shall have a cross-section equal to not less than eighty-six (86) per cent of the cross-section of duct opening. The

mandrel shall be fitted with a ring at the front end for the purpose of drawing it through the duct and with a leather or rubber washer at the rear end. This washer shall be of sufficient size to fit the duct closely so as to scrape away any mortar that may get into the ducts at the joints.

23. After the conduit is in place and all joints properly wrapped the concrete encasement, as above specified, shall be completed around the conduit, care being taken in placing the concrete not to disturb the alignment of the conduit sections or to injure or break same.

Manholes, Frames and Covers.

24. Manholes constructed of concrete in accordance with details shown on drawings shall be installed at points indicated on drawings or at such other points as the Engineer shall direct. The concrete used shall conform in all details to the concrete above specified for concrete encasement around conduit.

25. The reinforcing bars to be used in the construction of the roof of the manholes shall consist of corrugated, twisted or deformed bars of the size called for on the drawings, or of equivalent section, and of a form approved by the Engineer. Bars shall be free from defects, kinks or bends and shall be rolled from open hearth steel billets (not re-rolled material), and shall conform in all respects to "Standard Specifications for Billet Steel Reinforcement Bars" adopted by the American Society for Testing Materials in 1911, and revised in 1912, 1913 and 1914. Deformed bars shall be of the grade therein specified as "Intermediate Grade." All bars shall be new stock, free from rust scale or excessive rust when placed in the work. A thin coating of red rust resulting from short exposure will not be considered objectionable when bars are placed in the work, but any bars having rust scale or a thick rust coat shall be thoroughly cleaned satisfactory to the Engineer, or shall be rejected and removed from the premises upon the order of the Engineer. All bars shall be protected from the weather after delivery at the site of the work.

26. Pulling irons as shown on drawings shall be installed in the wall of the manhole opposite each conduit entrance.

27. A four (4) inch back pressure valve and trap with perforated inlet and guard, subject to the approval of the Engineer, shall be furnished and placed in the side wall near the floor of manholes designated by the Engineer, and the same shall be properly connected by means of four (4) inch tile pipe with the main sewer or with gutter drains or ditches at the nearest practicable point. Such drains shall be installed only as instructed by the Engineer or his representatives.

28. Each manhole shall be equipped with a cast iron frame and cover conforming to details shown on drawings.

29. The frames and covers shall be of tough, gray iron, free from injurious cold-shuts, shrinkage strains, blow holes or other imperfections. They shall be true to dimensions and workmanlike in finish. The covers shall fit the frames properly and shall seat solidly.

30. All patterns required for the manhole frames and covers shall be supplied by the contractor. After completion of the work such patterns shall be delivered, free of cost, to the Storeroom of the Sanitary District at Thirty-first street and Western avenue, Chicago, Illinois, and shall become the property of the Sanitary District.

Backfilling.

31. All back filling shall be done in layers, each layer to be thoroughly tamped dry. Where street openings have been made the back fill shall be brought to proper grade to leave a mound three or four inches above the street grade after temporary paving replacements have been made.

Resodding and Temporary Repaving.

32. In places where conduit, manholes or drain pipes have been installed in sodded parkway, after the back fill has been tamped and brought to proper grade, the black earth and sod shall be carefully replaced and watered.

33. Where street paving has been removed in the work hereunder, after the back fill has been tamped and brought to proper grade, all paving material shall be replaced and the street left in a safe condition suitable for traffic.

Removal of Debris.

34. All surplus earth, paving material and debris shall be removed

daily and the street and site of the work at all times kept as clean and free from obstructions as possible.

Rodding, Cleaning and Wiring.

35. After the completion of each section of the conduit and the manholes at the ends of same, and allowing sufficient time for the concrete to set, the Contractor shall rod each duct and draw through same after the rods, wire brushes and a mandrel, to be approved by the Engineer, to thoroughly clean the ducts and insure proper alignment of the same. If obstructions are encountered which cannot be removed by the brushes so as to pass the specified mandrel, the ducts shall be removed and relaid at the expense of the Contractor. A Number 9 galvanized iron wire shall be furnished by the Contractor, at his expense, and left in one duct of the entire conduit system, the particular duct to be designated by the Engineer. This wire shall extend from manhole to manhole and shall be bent at the ends to prevent it from slipping into the duct.

Plugs.

36. All exposed ends of ducts in manholes shall be plugged with wooden plugs in an approved manner.

Guarantee.

37. All work performed hereunder shall be guaranteed free from defects in material and workmanship, and any work or materials proving defective within a period of one (1) year from the date of completion of the entire work shall be replaced at the expense of the Contractor. A maintenance bond for this purpose is specified in Article 31 of "General Conditions."

Time of Completion.

38. All work included hereunder shall be completed within ninety (90) days after the date of approval by the Board of Trustees of said Sanitary District of the Contractor's bond on this contract.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all acts amendatory thereof and supplementary thereto.

Omission on Drawings.

Art. 2 The drawings furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Approximate Quantities.

Art. 3. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis the proposals offered for the work under this contract; and the Contractor hereby agrees that the Sanitary District shall not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the drawings herein mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received, as herein specified.

Examination of Site.

Art. 4. All bidders for the work under this contract are required before submitting proposals to examine the site of the work and adjacent premises, and the various means of approach to the site, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing all materials and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Changes in Drawings.

Art. 5. The Sanitary District reserves the right to make any changes in the specifications and drawings which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

Extra Work.

Art. 6. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price of cost of which is in excess of $500.00, shall be performed by said Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive, and the Sanitary District shall pay, in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occurs and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform

any extra work herein mentioned and the written notices and statements of claims for extras and of the work performed hereinbefore and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 7. In estimating the cost of extra work, the cost of material shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Engineer, certify, by his affidavit, the correctness of the amounts paid for material and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 8. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All inspection of any and all material furnished for use in the work to be performed hereunder shall be made at the site of the work after delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications and drawings, shall be removed and replaced by good and satisfactory materials and work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work, and at all places where material to be used in the work is manufactured, or stored, and shall be allowed to examine any material furnished for use in the work under this contract.

Progress Certificates.

Art. 9. It is further expressly agreed that the granting of any progress certificate, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Plant.

Art. 10. The Contractor shall furnish all material and supplies, plant, tools and implements, teams and care; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer, all necessary barricades, and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday and Holiday Work.

Art. 11. Whenever the Contractor shall be permitted or directed to per-

form work at night, or on Sundays or a holiday, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 12. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 13. The Contractor shall take whatever precautions are necessary to render any portion of the work secure in every respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Superintendence.

Art. 14. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer, who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and drawings and the orders of the Engineer thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer.

Workmen.

Art. 15. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 16. In accordance with the rules and regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employees such regulations in regard to cleanliness and the disposal of garbage and wastes, as shall conduce to their health, and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on streets, or on adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved by the Engineer and their use shall be strictly enforced.

Patents.

Art. 17. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 18. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupant of any land

or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 19. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State"; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10, 1911, in force May 1, 1912"; approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 20. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of this contract or any part thereof.

Subletting Work.

Art. 21. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the name of the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or mod-

ify the responsibility of the Contractor for the satisfactory and entire completion of said work and each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer, the Contractor shall require said party or parties to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

Liens.

Art. 22. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time and Progress.

Art. 23. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor and to complete all of said work within ninety (90) days after the approval of said bond.

It is understood and agreed that TIME is of the essence of this contract, and that a failure on the part of the Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 24. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work within the time specified in Article 23, then said Contractor shall pay to said Sanitary District the sum of Twenty Dollars ($20.00) for each and every day that said Contractor shall be in default in the completion of said work.

Said sum of Twenty Dollars ($20.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, then the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments, under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to TIME and LIQUIDATED DAMAGES FOR DELAYS.

Extensions or Additions.

Art. 25. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to LIQUIDATED DAMAGES, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 26. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or supensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 27. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District, or by any act or delay on the part of raidroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal Administrators, or by delays in obtaining priority certificates from the United States Government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties, under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 27), in the opinion of the Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer or Inspector in direct charge in the field, and unless the Contractor notify the Electrical Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 27), except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Electrical Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 28. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character and in the time herein specified; or if said Contractor shall fail

financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by said Contractor except in the manner heretofore specified, or if the Contractor shall lose control of said work for any cause whatsoever except by the act of God, the United States Government or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer, or if, in the opinion of the Engineer, the Contractor refuses or neglects to use measures to protect the said work from damage; or is, in the opinion of the Engineer, the Contractor is guilty of carelessness or incompetency in the execution of said work; or if, in the opinion of the Engineer, the said work has been or is being delayed by the Contractor; or if, in the opinion of the Engineer, the rate of progress is not such as to insure the completion of the work within the time specified; or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed; or that the Contractor is willfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Sanitary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or any part thereof, as may be designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in this article specified, the said Sanitary District shall have a lien upon all the equipment, material, supplies, machinery, implements and tools of the Contractor then existing on the premises of said Sanitary District or upon the streets for the purpose hereinafter specified; and the said Sanitary District may thereupon immediately take possession of all said equipment, material, supplies, machinery, implements and tools for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work itself or may award a new contract therefor and in completing the said work the Sanitary District or said new contractor may use such equipment, materials, supplies, machinery, implements, tools and plant, as above specified, as may be the property of said original Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District in hiring men and teams, machinery, implements, tools and plants, and any sum or sums of money paid by the Sanitary District for the purchase of equipment, materials, supplies, machinery, implements, tools and plant, and the cost of repairs or replacements thereto; and all cost of repairs and replacements upon machinery, implements, tools and plant, of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance, and as compensation for accidental injuries or death suffered by employees in the course of their employment in the performance of said work under the Employers' Liability Act of the State of Illinois, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the Sanitary District out of any moneys that may be due or may at any time thereafter become due to the said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid, then the Sanitary District may sell all materials, supplies, machinery, implements, tools and plant then on hand, whether obtained from the Contractor or by purchase, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of the said property at such sale shall be credited to the Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and

his bondsmen shall be liable to pay the amount of said deficiency; and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 29. The Contractor shall furnish a bond in the sum of Twenty-five Thousand Dollars ($25,000.00) for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on givng ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Maintenance Bond.

Art. 30. The Contractor shall furnish a maintenance bond, as specified in Section 37 of the specifications, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, for the faithful fulfillment of the requirements of that section. The execution of said maintenance bond shall be a condition precedent to the final payment specified in Article 33. The maintenance bond shall be in the amount of two (2) per cent of the amount of this contract for one (1) year only.

Prices.

Art. 31. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and material, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof, in full compliance with the drawings and specifications and the requirements of the Engineer under them, to-wit:

For four (4) duct tile conduit installed complete in unpaved streets, the sum of Eighty-nine Cents ($0.89) per trench foot.

For four (4) duct tile conduit installed complete in paved streets, the sum of Two Dollars and Sixty-five Cents ($2.65) per trench foot.

For four (4) duct tile conduit installed complete in unsodded parkways, the sum of Eighty-nine Cents ($0.89) per trench foot.

For four (4) duct tile conduit installed complete in sodded parkways, the sum of One Dollar and Twenty Cents ($1.20) per trench foot.

For manholes constructed complete (exclusive of valve, trap and sewer connections) in unpaved streets, the sum of Ninety-two Dollars ($92.00) each.

For manholes constructed complete (exclusive of valve, trap and sewer connections) in paved streets, the sum of One hundred and fifteen Dollars ($115.00) each.

For manholes constructed complete (exclusive of valve, trap and sewer connections) in unsodded parkways, the sum of Ninety-two Dollars ($92.00) each.

For manholes constructed complete (exclusive of valve, trap and sewer connections) in sodded parkways, the sum of Ninety-six Dollars ($96.00) each.

For each four (4) inch back pressure valve and trap installed complete, the sum of Eleven Dollars ($11.00) each.

For four (4) inch drain tile from manhole installed complete as specified, where drain pipe is run in trench with conduit, the sum of Fifty-five Cents ($0.55) per foot of pipe.

For four (4) inch drain tile from manhole installed complete as specified, where drain pipe is run in separate trench, the sum of Sixty-five Cents ($0.65) per foot of pipe.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and

processes used in the work described in the specifications and agreements. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 32. The said Sanitary District agrees to pay said Contractor for the work performed hereunder in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed EIGHTY-SEVEN AND ONE-HALF (87½) PER CENT of the value of the work properly performed under this contract, and that the remaining TWELVE AND ONE-HALF (12½) PER CENT shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 33. Upon the completion of all the work included under this contract and the execution of the bond called for in Article 30, the Engineer will certify to that effect. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate, pay, and it hereby binds itself to pay the said Contractor in cash the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Committee on Finance.
Attest:
John McGillen,
(Seal) *Clerk.*

F. E. Newbery Electric Co. (Seal)
of Illinois.
By F. E. Newbery,
President.
Attest:
J. Lind,
Secretary.
Approved May 22, 1919:
G. S. Brack,
Electrical Engineer.
Approved:
C. Arch Williams,
Attorney.
Chas. E. Anthony,
Asst. Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we F. E. Newbery Electric Company as principal and Maryland Casualty Company as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Twenty-five Thousand Dollars ($25,000.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals

and dated this 22nd day of May, A. D., 1919.

The Condition of the Above Obligation Is Such ,That whereas the above bounden F. E. Newbery Electric Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 22nd day of May, A. D., 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the construction of an underground system as specified in the attached contract.

Now, If the said F. E. Newbery Electric Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the drawings accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which may in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said F. E. Newbery Electric Company, agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums for money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911; in force May 1, 1912," approved June 28, 1913; in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said F. E. Newbery Electric Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said F. E. Newbery Electric Company or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913; in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said F. E. Newbery Electrical Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

F. E. Newbery Electric Co. (Seal)
of Illinois,

By F. E. Newbery,
President.

Maryland Casualty Company, (Seal)
By O. P. Alford,
Attorney-in-fact.

Approved as to form June 7, A. D. 1919:
Chas. E. Anthony,
Asst. Attorney.

C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Commitee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it is advised by the Marshal that owing to an accident it will be necessary to build a new stem in the police boat "White Flyer" and to make certain betterments and changes on said boat, at an estimated cost of $300.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Marshal be and he is hereby authorized and directed to have the work above specified performed, provided the cost of the same shall not exceed the sum of $300.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board a grant of easement from Amanda Reifenstuhl and husband, Herman A. Schultz and wife, Fred W. Schultz and wife, Edward E. Schultz and wife, Emma Grablowski, Jennie Weihofen and husband and John B. Schultz and wife, whereby said grantors, for the consideration of $150.00, grant to the Sanitary District a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer and appurtenances thereto in the Desplaines River district, in, under and through certain real estate owned by them. Said easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the said form of easement, which is hereto attached, the same having been duly executed by the grantors above named, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant in the sum of $150.00, payable to the order of Edward Reifenstuhl, Attorney in fact for said grantors, and deliver the same to him in full payment of the consideration for said grant.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 12, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for part of June payrolls, for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll.

John McGillen, Clerk (general payroll for first half of June, 1919)		$ 27,752.56

Construction Account.

E. H. Hanrahan (cleaning ditches, Calumet-Sag Channel)	$ 492.00	
Star Taxi Service & Garage (taxi service, Blue Island)	74.00	
Goodyear Rubber Company (hip boots)	13.00	
Herman H. Hettler Lumber Company (lumber)	9.08	
Goodyear Rubber Company (sporting boots)	6.50	
		594.58

Maintenance and Operation Account.

John McGillen, Clerk (special payroll, Lawrence Ave. Pumping Station, first half of June, 1919)	$ 153.40	
John McGillen, Clerk (special payroll for last half of April, 1919, Lawrence Ave. Pumping Station)	153.40	
John McGillen, Clerk (railroad tickets, Chicago to Joliet and Lockport)	27.32	
Abe Burrell & Co. (labor, repairing scows)	948.00	
Theo. B. Robertson Products Company (soap powder)	14.11	
Theo. B. Robertson Products Company, Inc. (soap powder, 39th St. Pumping Station)	29.46	
Chicago Surgical & Electrical Company (heating device, 39th St. Pumping Station)	13.75	
Sullivan Oil Company (engine oil, Lawrence Ave. Pumping Station)	21.01	
Thomas F. Ryan Company (lumber in repairing bridges)	255.22	
Argo Summit Lumber Company (lumber repairing bridges)	82.01	
James B. Campbell & Co. (tools and supplies)	73.34	
Miller Hardware Company (supplies)	71.35	
Bentley, Murray & Co. (printing forms)	71.00	
The Thos. F. Ryan Company (lumber)	63.36	
James O. Heyworth (shovel and cement sacks)	23.40	
Robert S. Leete & Co. (bond paper)	20.00	
F. A. Koth (labor and material, repairing Wilmette pumping station)	3.25	
Chas. Novak & Son (sheet glass)	2.30	
Keuffel & Esser Company (triangle)	.61	
		2,026.29

Illinois & Michigan Canal and Illinois River Conditions Department.

Wadsworth-Howland Company (white lead)	$ 20.15	
Joseph Ehrlich (office brooms)	10.00	
George B. Carpenter & Co. (paint)	7.84	
		37.99

Law Department.

John McGillen, Clerk (expenses of employe)		30.52
Amount carried forward		$ 30,441.94

Amount brought forward		$ 30,441.94
Clerical Department.		
John McGillen, Clerk (expenses of employe)	$ 7.96	
Robt. S. Leete & Co. (stenographic books)	85.50	
F. J. Koch Company (binding work)	13.20	
		106.66
Police Department.		
Geo. B. Carpenter & Co. (miscellaneous supplies)	$ 3.80	
John McGillen, Clerk (upkeep of automobile)	30.00	
		33.80
General Account.		
John McGillen, Clerk (expenses of Trustee)	$ 52.62	
John F. Higgins (printing reports of receipts and expenditures for year 1917)	3,000.00	
John McGillen, Clerk (expenses of employe)	18.07	
John McGillen, Clerk (expenses of employe)	9.93	
		3,080.62
Electrical Department.		
John McGillen, Clerk (freight bill on insulators)	$ 10.55	
John McGillen, Clerk (water tax)	4.23	
Chicago Telephone Company (service)	361.80	
Conroy Boiler & Tank Works (link hooks)	313.42	
General Electric Company (electrical supplies)	219.03	
The Ohio Brass Company (insulators)	280.90	
General Electric Company (electrical supplies)	170.63	
Wilbur J. Connell (drills)	97.04	
The Republic Rubber Company (hose and nipples)	109.19	
Bentley, Murray & Co. (printing forms)	100.00	
Vesta Accumulator Company (batteries, etc.)	97.87	
Overland Motor Company (auto supplies)	87.16	
Garrett J. Cushing (compensation for personal injuries)	78.00	
Conroy Boiler & Tank Works (threaded plugs)	76.00	
William Heggie (drills, shafts, etc.)	71.65	
William F. Klemp (iron screens)	64.00	
Clifton-Kelley Shows (unused portion of deposit)	63.03	
Norris-Ward Coal Company (coal)	45.31	
Artistic Wood Turning Works (cable blocks)	34.30	
Commercial Tire & Auto Company (inner tubes)	34.20	
General Electric Company (electrical supplies)	25.20	
Overland Motor Company (auto supplies)	24.69	
Commonwealth Edison Company (electrical supplies)	22.45	
The Lombard Governor Company (leather cups for pumps, etc.)	20.29	
Hydrox Company (water coupon books)	16.00	
Parker's Towel Supply Company (service)	16.00	
Albert Hancock & Co. (office supplies)	14.50	
H. M. Hooker Glass & Paint Company (Mexoline)	14.12	
Standard Oil Company (gasoline and oil)	13.92	
South-West Printing Company (printing cards)	12.75	
Consumers Company (ice)	10.60	
The Lombard Governor Company (repairs to pumps)	10.50	
A. Hannibal (repairing office chairs)	6.37	
The Rayfield Agency (repairing carburetors)	4.24	
The C. H. Hanson Company (fibre tags)	4.10	
The Fair (ticking)	3.45	
Sidney Smith (body polish)	2.50	
S. Deschauer Company (cotter pins and washers)	.82	
Overland Motor Company (war tax omitted on paid bill)	.16	
General Electric Company (lead covered cable)	5,712.39	
Amounts carried forward	$ 8,253.36	$ 41,916.38

Amounts brought forward		$ 8,253.36	$ 41,916.38
General Electric Company (lead covered cable)		5,214.51	
General Electric Company (lead covered cable)		4,699.75	
General Electric Company (lead covered cable)		3,635.99	
General Electric Company (lead covered cable)		841.52	
Central Electric Company (wire)		339.07	
Commonwealth Edison Company (strain insulators)		104.82	
New York Belting & Packing Company (leather belt)		35.21	
			23,124.23

Miscellaneous Accounts.

John McGillen, Clerk (payroll for last half of May, 1919, account repairs to North Shore Channel, etc.)—			
Construction Account	$ 360.70		
Maintenance and Operation Account	2,082.55		
		$ 2,443.25	
John McGillen, Clerk (payroll for first half of May, 1919, account repairs to locks, Main Channel,— etc.)—			
Electrical Department	$ 52.00		
Construction Account	24.00		
Maintenance and Operation Account	305.00		
		381.00	
John McGillen, Clerk (special payroll for first half of June, 1919, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 192.00		
Electrical Department	96.00		
		288.00	
John McGillen, Clerk, Clerk (railroad tickets, Chicago to Blue Island and Chicago to Lockport)—			
Construction Account	$ 13.05		
Maintenance and Operation Account	23.76		
		36.81	
United States Rubber Company (boots)—			
Construction Account	$ .23		
Maintenance and Operation Account	31.20		
		31.43	
			3,180.49
Grand Total			$ 59,967.74

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANC,
GEO. W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it will be necessary from time to time to inspect at the mills and test in the shops the reinforcing and structural steel to be used on various structures of the Sanitary District, at an estimated cost of $400.00, and requests authority to expend said sum for said purposes.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to expend not to exceed the sum of $400.00 for the work above specified.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that the toilet room in the terminal station at 31st street and Western avenue is located in the northwest corner of the station and it is adjacent to a point where a number of cables leave the station and interferes to a considerable extent with the proper training of said cables, and he requests that he may change the location of said toilet room and install the plumbing equipment therein at an estimated cost of three hundred fifty dollars ($350.00).

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to perform the work above specified, provided the cost of the same shall not exceed the sum of three hundred fifty dollars ($350.00).

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it is necessary to increase the length of the shafts of the four large blowers to be installed in the Desplaines River sewage treatment works and install additional outboard bearings on each of said shafts, due to a change in the layout of the motors and blowers to be installed in said station, and he requests that he may be authorized to order the Stannard Power Equipment Company, the contractors for furnishing and delivering said blowers, to perform said work under the extra work clause of its contract, at an estimated cost of $496.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to order the Stannard Power Equipment Company to perform the work above specified under the extra work clause of its contract for furnishing and delivering the blowers for Desplaines River sewage treatment plant, Division R, provided the cost of the same shall not exceed the sum of $496.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it is advised by the Chief Engineer that in order to repair the walls of the Main Channel in an economical manner it is necessary to purchase a seven cubic foot concrete mixer, which can easily be moved from place to place along said walls; that he has received twelve bids for furnishing mixers of various sizes and capacities, which bids are herewith transmitted to the Board. The lowest of said bids for furnishing a mixer of the size and capacity suitable for the work in question is that of the Koehring Machine Company in the sum of $865.00, F. O. B. Chicago, and he recommends that said bid be accepted.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to accept the bid of the Koehring Machine Company in the sum of $865.00, F. O. B. Chicago, to furnish the mixer above specified.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Commitee on Engineering:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on August 8, 1918 (pages 893-1017 of the Proceedings), entered into a contract with the T. J. Forschner Contracting Company for the work of furnishing, delivering and erecting the building, pumping machinery, electrical equipment, conduit and wiring of the Calumet Sewage Pumping Station as specified under Divisions A, B, C and D of said contract.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that under Subdivision D of Item 16 of said Division A of said contract, there is specified to be furnished by said contractor, one traveling crane of 15 tons rated capacity, with the necessary equipment and appurtenances relating thereto. That the bridge of said crane is to be constructed of a box girder type and that the axles are to run in self-lubricating bronze boxes of the M. C. B. type, or equal, which crane as specified is of the electrically driven type of a special design for hand traveling work. He further states that he has been investigating the crane specified and finds that a satisfactory hand traveling crane can be obtained which will be lighter than the one specified owing to the customary use in hand traveling cranes of single web girders instead of box girders and the use of roller bearings instead of self-lubricating bronze boxes, and recommends that the specifications be changed so as to permit said contractor to furnish a crane of a standard hand traveling type instead of the special type specified, with a consequent saving of a considerable sum to the Sanitary District.

Your Committee having considered the subject matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized to modify said contract between the Sanitary District and the T. J. Forschner Contracting Company in the particulars above specified, provided said contractor and the sureties on its bond consent in writing to such modification.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Passed and not voting—Messrs. Sergel and Nance—Two.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the following contracts for resi-

dence lighting have been executed by him:

H. C. Frentz, 37 Greenwood avenue;
E. R. Simpson, 488 Elm street;
Mrs. Arthur Engelland, 196 Western avenue;
Aug. Schreiber, 438 Western avenue;
John C. Nehrke, 366 Broadway;
L. J. Lyons, 148 Lewis street;
all in Blue Island Ill.
J. Dubsky, 2611 Ridgeland avenue;
E. J. Riley, 3427 Maple avenue;
L. H. Luther, 3420 Hiawatha avenue;
A. Warndett, 3016 Winfield avenue;
all in Berwyn, Ill.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the action of the Electrical Engineer in executing the contracts for residence lighting with the parties above mentioned be, and the same is hereby ratified and confirmed.

Respectfully submitted,
H. E. Littler,
Chairman.

Wm. J. Healy,
Matt A. Mueller,
Wallace G. Clark,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

Chicago, June 12, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen — Your Committee on Electrical Development herewith presents renewal contract with the Chicago Aluminum Castings Company, 2647 Ogden avenue, and new contract with H. J. Allen, 6735 Stanley avenue, Berwyn, Illinois, wherein the Sanitary District agrees to furnish and said parties agree to take electrical energy for the periods and upon the terms and conditions set forth. Said contracts have been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the attached contracts, which have been properly executed by said above named parties.

Respectfully submitted,
H. E. Littler,
Chairman.

Wm. J. Healy,
Matt A. Mueller,
Wallace G. Clark,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Clark stated that Mr. J. L. Jacobs, of J. L. Jacobs & Company, which company was employed under a resolution of the Committee on Employment adopted on May 29, 1919, to make a classification of the employes of the Sanitary District, was present in the Board room, and he requested unanimous consent of the Board for permis-

sion for Mr. Jacobs to address the Board and explain the scope of the work to be performed by his company.

Unanimous consent having been obtained, Mr. Jacobs explained to the Board the nature of the work to be performed, which he aimed to have completed prior to the preparation of the appropriation ordinance for the year 1920, and he invited the aid and co-operation of the Trustees, heads of departments and employees in his work.

Mr. Clark stated that he had an answer to the statements made by President Sergel at the meeting of the Board of June 5, 1919, and read his answer, as follows:

TRUSTEE CLARK'S STATEMENT.

Statement of Wallace G. Clark concerning supposed charges made against him by President Charles H. Sergel at the Board meeting of June 5, 1915.

For a number of days prior to the Board meeting of June 5, 1919, President Sergel boasted through the press that he would at this meeting of the Board present charges against me of such a nature that I could not afterward be elected to public office. Persons who read such statements expected on that occasion, by the statements to be made by Sergel, that I would be blown to atoms and never again would I be able to face my friends or official associates.

Sergel had combed my private and public record with a fine-tooth comb to find something therein which would prove discreditable to me. It was only after the business of the Board was completed that I was able after repeated demands upon the President to force him to produce from his vest pocket a typewritten statement he had prior to the Board meeting given to the public press expecting that the press would print the statement without giving me an opportunity to refute the charges made.

What Were the Charges?

They were not that I had been dishonest in the discharge of my public duties or in the conduct of my private affairs, but merely that I, with certain of my business associates, had objected to certain tax levies made by taxing bodies other than the Sanitary District, of which I am a trustee. The charges did not disclose that I had obtained an exemption of taxes with reference to any Sanitary District tax levy.

The Michigan Boulevard Building Association, of which I was a minority stockholder, had filed objections in 1916 as to 1915 tax levies of certain taxing bodies, like the City of Chicago, Cook County and others, but not in relation to the Sanitary District tax levy—although there were upwards of five thousand persons, firms and corporations in the City of Chicago, of great prominence, who had filed objections to tax as of practically all taxing bodies.

All these persons who filed objections to the 1915 Sanitary District tax obtained an order of the County Court exempting a large portion of such tax, and the reason why most people filed objections was to avoid having their property discriminated against and to avoid paying an unjust proportion of the tax levy.

Neither I nor my business associates in the Michigan Boulevard building filed objections to the 1915 Sanitary District tax, and that was the only tax to which objection was ever sustained by anyone.

In 1917, when it came time to file objections to 1916 taxes, I had secured the passage of what is called the Sanitary District Validating Tax Act, which corrected all mistakes that had been made in the making of the 1916 tax levy. (Questions of publication and appropriation).

With Trustees Dailey, Paullin, Carr and Attorneys Adcock, Beebe and

Hall and others, I visited Springfield on many occasions, securing the passage of the Validating Act as an emergency measure by a vote of two-thirds of each house, and thereafter within ten days we obtained the signature of the Governor to the bill. It became a law before it was necessary to file objections to 1916 taxes.

In 1917 the Board of Trustees, with my support, adopted an ordinance, providing for a budget—although there was and is no law requiring a budget in the Sanitary District.

In order that there never could be any possible question raised by anyone as to Sanitary District tax levy, I suggested the employment by the Board of the recognized budgetarian expert of the United States, Mr. J. L. Jacobs, to install the budget system in the Sanitary District.

Upon the passage of the Validating Act and upon the placing of the Sanitary District upon a budget basis, requiring publication of its appropriation and tax levy ordinances, there was never any question as to the validity of Sanitary District taxes, and no one ever seriously urged objections to such taxes; nor has anyone ever received an exemption as to Sanitary District taxes since that time.

When my business associates and I in the Michigan Boulevard building might have obtained a benefit from objecting to Sanitary District tax levy for the year 1915, because I was a trustee of the Sanitary District I prevailed upon them not to file such objections, and none was filed, and no exemption was received.

After the passage of the Validating Act and installation of the budget system, it never occurred to me that there could be any possible objections sustained against Sanitary District taxes, and whether my business associates filed such objections or not was of no consequence.

All these facts were known to President Sergel, as well as the fact that as to one hundred seventy-five parcels of land owned individually by me in the City of Chicago I never filed objections of any kind to any tax of any taxing body, and no exemption was ever obtained by me in favor of such property. That was property over which I had individual and complete control.

In mentioning this fact I do not intend to cast any reflection upon the men of high business standing in the community who have filed objections to tax levies. We find in the list of names of persons, firms and corporations filing objections to taxes trust companies, educational institutions, seminaries, libraries, hotels, theatres, safety deposit companies, various clubs—including the Hamilton Club of Chicago, which has the distinguished honor of numbering among its membership Mr. Charles H. Sergel—large estates in the hands of trustees or executors, public utility corporations, all the great steam railroads having terminals in Chicago, and also many prominent men who are on the directorates of the various national and state banks,—men who have attained prominence in developing the large business enterprises in Chicago; men who have contributed their time and money to the maintenance and work of the great civic bodies of this city, which civic bodies have been largely responsible for the great progress made by Chicago financially, commercially and otherwise.

Without doubt anyone ought to be proud to be on the list containing the names of men of such standing and character.

Many of the objections that were filed by this multitude of business men and corporations were sustained. I had the legal right, as my associates did, to file objections to the 1915 Sani-

tary District tax, and those objections would have been sustained had they been so filed. I did not, however, consider it in keeping with my responsibility to the public to do so, and I did not do it.

Under the law no person is compelled to pay taxes that are not legal and just.

Mr. Lawley moved that the statement be published in the Proceedings.

TEMPORARY CHAIRMAN.

President Sergel called Mr. Healy to the chair and took a place on the floor.

Mr. Sergel moved that the statement, which he read at the meeting of the Board of June 5, 1919, be published in the Proceedings.

PRESIDENT SERGEL'S STATEMENT.

Among the various misdeeds with which Wallace G. Clark, trustee of the Sanitary District has been charged, one of the most discreditable has just come to light, and on account of its bearing on public affairs should be made generally known. As Trustee of the Sanitary District he has levied taxes on property of other citizens of Chicago and the surrounding towns, and then, taking advantage of his own acts, has gone into court to attack on mere technicalities the tax levies of the Sanitary District and other taxing bodies, thus avoiding the payment of taxes that other citizens have had to pay. The Michigan Boulevard Building Company, of which he is and has been President, the property of which is assessed and appears on the records in the name of Jarvis Hunt, J. Milton Trainer and Wallace G. Clark, trustees, went into court against the collection of certain taxes levied in the years 1915, 1916 and 1917, and, as the result of this course, evaded taxes to the amount of $11,045.22. Clark's real estate firm of Clark and Trainer also objected to taxes on twenty-four pieces of real estate and dodged taxes in proportion in 1917.

All this time Wallace G. Clark was trustee of the Sanitary District from which he has drawn a liberal salary for fourteen years. And during this time he is said to have grown rich.

That the people may judge of this matter for themselves the facts in the case are given herewith in detail, practically all statements relating to the taxes being attested under seal of the County Clerk.

The value of the Michigan Boulevard Building was given in a statement, October 30, 1916, over Mr. Clark's signature, as $1,756,417, and the land as $2,341,440, or a total combined value of $4,097,857. Assessed value was and is $549,513, about 13 percent of the real value.

The Sanitary Board on July 29, 1915, made a levy of taxes on all taxable property of the District. Wallace G. Clark voted for this levy.

In 1915 the taxes levied against the Michigan Boulevard Building and land were as follows:

State tax	$ 3,022.33
County tax	3,242.13
South Park tax	2,253.01
City taxes	10,001.14
School tax	9,946.19
Sanitary District tax	2,307.96
Forest Preserve tax	54.96
Total taxes spread	$30,827.72

Against these taxes Mr. Clark's Company through its attorneys, Allen G. Mills and Vail and Vette, filed objections to the levies for the Cook County tax, School tax, City tax and Forest Preserve tax, but, on this occasion, not against the Sanitary District tax. By these objections, he avoided the payment of the following taxes:

County tax	$2,362.91
Sanitary District tax	1,373.77
Forest Preserve tax	54.96
Total taxes evaded	$3,790.64

The record of payment on the taxes for 1915 follows:

May 8, 1916, "Paid on Account"	$26,871.23
Aug. 28, 1917, "Paid Bal. on Account"	164.85
Total paid	$27,036.08

The difference between the $27,036.08 paid and the $30,827.72 spread is $3,790.64, lost to the municipalities affected by the objections of the Company of which Mr. Clark is head, despite the fact that he himself participated in making the levy of the $1,373.77 which he profited by the Supreme court's ruling on the Sanitary District taxes.

The Sanitary District's tax levy ordinance for 1916 was passed Aug. 2, and Wallace G. Clark voted for it. The Michigan Boulevard Building was assessed this year as follows:

State tax	$ 4,396.11
County tax	3,571.84
South Park tax	2,253.01
City taxes	10,825.44
School tax	10,275.90
Forest Preserve tax	109,91
Sanitary District tax	2,088.15
Total taxes spread	$33,520.33

Against these taxes Mr. Clark's company, through its attorneys, Ellis & Lewis, filed objections to the levies for the City of Chicago, Cook County, and the Sanitary District. This is Case "No. 467, General Objections" in the office of the Clerk of the County court, filed in 1917.

Following is a summary of Clark's Company's objections to the Sanitary District tax for 1916:

1. That the District did not specify in detail the objects and purposes for which taxes were required.

2. That the amount levied for the payment of bonds and interest is excessive.

3. That no appropriations were made for the year 1916 upon which to base a valid tax levy.

4. That the tax levy ordinance for the year 1916 was not published according to law.

5. No appropriating ordinance was passed other than the tax levy for the year 1916.

6. That no ordinance was passed designating the purposes for which the money was to be expended prior to the adoption of the tax levy.

7. That no ordinance or resolution passed by the Board of Trustees of the Sanitary District was published in any newspaper.

Other objections go to the legality of past bond issues and in Objection No. 9. it is specifically urged "That said bonds are void." Here we have a trustee attacking the validity of the District's bonds on the market and in the hands of innocent purchasers and for which the District has received value. And many of these bond issues he himself voted for.

By these objections based on technicalities of the law, Mr. Clark's Company dodged the following taxes:

County tax	$ 219.80
City tax	6,704.07
School tax	329.71
Total taxes evaded	$7,253.58

The courts held the Sanitary District levy valid and Mr. Clark's Company, although it exerted every effort, that the law would permit, to do so, failed to evade any of the District taxes Mr. Clark had helped to levy for that year.

On April 1, 1917, Clark's Company "paid on Accout" $23,629.10 and on April 10, 1918, after the Supreme court decision, $2,637.65 was paid which, with the $7,253.58 evaded, made up the company's total taxes of $33,520.33. At the same time Mr. Clark's com-

pany was saving this money thousands of others who scorned to take advantage of a legal loophole were paying the full amount of their taxes as spread on the county treasurer's books.

This same year—1917—Clark and Trainer filed objections similar to those in the Michigan Boulevard Building case and saved money in evaded taxes for the firm on the same items. This is Case No. 466 General Objections for 1917 on file in the Clerk of the County Court's office.

Again in 1918, Mr. Clark's company filed its objections to taxes levied for 1917 for Cook County, City of Chicago and the Sanitary District. Here again Mr. Clark was one of the trustees who fixed the levy for the Sanitary District which he attacked through his attorneys, Vail & Vette, William M. Lawton and Edward M. Liessmann. The total taxes on the Michigan Boulevard Building Property as spread for 1917 were $33,795 09. Of this amount there was paid "On account" $32,476.26, leaving a balance of $1,318.83 unpaid. This amount still is in litigation.

Following is a summary of Clark's company's objections filed against the Sanitary District taxes for 1917:

1. That the amount levied for the payment of bonds and interest is excessive because the District has not appropriated and applied its net earnings from water power and docks to the payment of bonds and interest.

2. That each and all of the items in the annual appropriation bill and the annual tax levy ordinance based thereon are indefinite and not properly itemized.

3. Each of the items in the budget and levy ordinance was not appropriated and levied for the purposes authorized by law.

4. Each and all of the items in the annual appropriation bill for 1917 and the levy ordinance based thereon are unauthorized by law and void.

5. That the amount of $450,000 appropriated and levied for loss and cost of collection of taxes is excessive.

6. That all the items appropriated for "Sewers, tunnels and sewage purification works, amounting to $2,331,900 are void for the reason that the District has no power to levy taxes for such purposes.

If the court had held these objections valid, the Sanitary District would have defaulted on the interest on its bonds, could not have paid the bonds due to the amount of several millions in those years and would have had to stop all progress on the great works of the District which are absolutely necessary to conserve the health of the people.

Now bear this important fact in mind. Each and every year that Wallace G. Clark's Michigan Boulevard Building company and his real estate firm of Clark & Trainer have fought the tax levies or any part of them, he has been a member of the Sanitary District Board, a tax levying body. While he has levied taxes for others to pay, he himself has sought to avoid the payment of his own taxes.

On roll call both statements were ordered published by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

President Sergel then took the chair, and Mr. Healy took his seat.

Mr. Healy presented the following resolution:

WHEREAS, On Tuesday, June 24, 1919, citizens of Swedish ancestry throughout the United States and many foreign countries will celebrate Mid-Summer Day by festivities and exercises in keeping with the holiday occasion; therefore, be it

Ordered, That the heads of all departments of The Sanitary District of

Chicago be, and they hereby are directed to excuse from duty wherever possible any Sanitary District employe of Swedish birth or ancestry who shall request permission to be absent from duty Tuesday, June 24, 1919, for the purpose of observing Swedish Mid-Summer Day.

Mr. Healy moved that the resolution be adopted.

The motion prevailed.

Mr. Carr presented the following resolution:

WHEREAS, Saturday, the 14th day of June, 1919, has been proclaimed Flag Day by the President of the United States, and the Governor of the State of Illinois; and,

WHEREAS, Patriotic meetings and celebrations in honor of the Flag are to be held on said day, therefore, be it

Resolved, That the offices of The Sanitary District of Chicago be closed on that day, and that only such employes as are imperatively necessary for the actual work of the District be required to report for duty on said day.

Mr. Carr moved that the resolution be adopted.

The motion prevailed.

Mr. Lawley read an opinion from Messrs. Wood & Oakley, attorneys, which states that the Sanitary District is justified in accepting bonds at par from the City of Chicago to satisfy judgments held by the Sanitary District against said city.

Ordered placed on file.

Mr. Lawley presented the bond of Mr. Lawrence F. King, Clerk of the Sanitary District, in the sum of $50,000, with the Southern Surety Company thereon as surety, given for the faithful performance and discharge of his duties of office, and moved that the bond be approved.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

John W. Gillson, Clerk.

C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, JUNE 19, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

MINUTES.

Mr. Lawley moved that the minutes of the regular meeting of June 5, 1919, be approved, as printed, without being read.

The motion prevailed.

SUSPENSION OF REGULAR ORDER OF BUSINESS.

Mr. Lawley moved that the regular order of business be suspended for the purpose of having Judge Anton T. Zeman, of the Circuit Court of Cook

County, administer the oath of office to Mr. Lawrence F. King, the newly elected Clerk of The Sanitary District of Chicago.

The motion prevailed.

Judge Zeman administered the oath to Mr. Lawrence F. King, and the Clerk then assumed the duties of his office.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the Clerk of the Sanitary District on June 12, 1919, issued his checks on the Continental & Commercial National Bank to the order of the following named employes of the Sanitary District for services rendered, in the sums stated, as follows:

June 12, 1919, check No. 217, order of P. J. Whalen	$57.50
June 12, 1919, check No. 224, order of J. J. Ryan	57.50
June 12, 1919, check No. 207, order of E. H. Boddy	57.50
June 12, 1919, check No. 221, order of John Witt	57.50
June 12, 1919, check No. 219, order of Thomas Mooney	57.50

which checks were not delivered to said employes, but were stolen from a desk of the resident engineer in the field office of the Sanitary District at the Desplaines River Sewage Treatment Plant.

The payment of said checks has been stopped at the bank and it is necessary to authorize the Clerk to issue new checks in the place of the ones so stolen.

Your Committees having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk of the Sanitary District be and he is hereby authorized and directed to issue new checks in the several sums stated, payable to the persons above named, and deliver the same to them in payment of services rendered.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received requests from the Electrical Engineer, Attorney, Treasurer and Clerk to make transfers of funds from various unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which no appropriations have been made and to increase certain appropriations.

Your Committee having considered said requests is of the opinion that same should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make the following transfers in appropriations for the year 1919, in accordance with the several requests of the heads of the departments attached hereto:

Department of Electricity.

From Account No. 12-518, Electrical Equipment.....$5,252.21
to the following accounts:

No. 12-24	Advertising	100.00	
No. 12-251	Electric current	1,922.21	
No. 29-454	Repairs and replacements of engine and machine parts	200.00	
No. 29-456	Repair and replacement of valves and valve parts	65.00	
No. 29-515	Repair and replacement of commercial lighting equipment	50.00	
No. 29-516	Repair and replacement of heating and ventilating equipment	725.00	
No. 29-521	Repair and replacement of dredging and excavating equipment	125.00	
No. 29-5271	Repair and replacement of motor vehicle equipment	700.00	
No. 29-5272	Repair and replacement of vehicles, not power driven	150.00	
No. 29-53	Repair and replacement of furniture and office equipment	40.00	
No. 29-553	Repair and replacement of testing equipment	25.00	
No. 12-521	Dredging and excavating equipment	500.00	
No. 12-529	Portable plant equipment, N. O. C	600.00	
No. 12-551	Laboratory equipment	50.00	
			$5,252.21

From Account No. 12-455, Electrical Parts.....$1,000.00
to the following account:

No. 12-456	Valves and valve parts	$1,000.00

From Account No. 12-852, Marine Insurance.....$ 20.00
to the following account:

No. 12-856	Insurance N. O. C	20.00

Department of Law.

From Account No. 4-452, Motor Vehicle and Motor Boat Parts.....$ 75.00
to the following account:

No. 4-322	Liquid fuels and illuminants	75.00

From Account No. 4-555, books, maps and charts.....$ 35.00
to the following accounts:

No. 4-813	Equipment rents	$10.00	
No. 4-815	Fees for permits	25.00	
			35.00

Department of the Treasury.

From the following accounts:

No. 6-222	Postage	$ 3.00	
No. 6-232	Printing of pamphlets and books	17.00	
No. 6-311	Office supplies	50.00	
			$ 70.00

to the following account:

No. 6-289	Impersonal services, sundries N. O. C.	70.00

Department of the Clerk (Board of Trustees).

From Account No. 2-211, Railroad and Steamship Transportation of persons ..... $ 482.50

to the following accounts:

No. 9-212	Local transportation of persons	$400.00	
No. 9-57	Personal equipment (Trustees' stars)	82.50	
			482.50

Department of the Clerk.

From Account No. 5-222, postage ..... $ 500.00

to the following account:

No. 5-29-53	Repair and replacement of furniture and office equipment	500.00

From the following accounts:

No. 5-311	Office supplies	$562.50	
No. 5-58	Equipment N. O. C.	75.00	
			$ 637.50

to the following accounts:

No. 5-2958	Repair and replacement of equipment N. O. C.	25.00	
No. 5-382	Household supplies	12.50	
No. 5-53	Furniture and office equipment	600.00	
			637.50

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (pages 131 and 132 of the Proceedings), sets up in the Department of Law (Item 18) two positions with salaries attached thereto, totaling the sum of $2,640.00 and under the Accounting and Record Division (Item 8) of the Department of the Clerk of the District, one position with the salary attached thereto (page 135 of the Proceedings), the sum of $1,500.00, which positions and salaries are set forth in the order hereto attached.

Your Committee further reports that the Committee on Employment has requested that the salaries attached to certain of said positions be adjusted to meet the requirements of the Department of Law and the Department of the Clerk of the District, which can be done without increasing the respective sums of $2,640.00 and $1,500.00 heretofore appropriated.

Your Committee having considered said request, is of the opinion that same should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be and he is hereby authorized and directed to make adjustments of the salaries set up under the Department of Law and Accounting and Record Division of he Department of the Clerk of the District in the Appropriation Bill for the year 1919, in accordance with the requirements of the Committee on Employment, as follows:

Change from:

Department of Law, Account No. II—Salaries and Wages of Regular Employes.

Stenographers, 2 at $1,320.00...$2,640.00

Department of Clerk, Account No. II, Salaries and Wages of Regular Employes Accounting and Record Division.

Stenographer, 1 at $1,500.00....$1,500.00

$4,140.00

to:

Department of Law, Account No. II, Salaries and Wages of Regular Employes.

Stenographer, 1 at $1,320.00....$1,320.00
Stenographer, 5 17-30 months, 1 at $1,320.00 ..... 612.33
Stenographer, 6 13-30 months, 1 at $1,500.00 ..... 804.17

Department of Clerk, Account No. II, Salaries and Wages of Regular Employes Accounting and Record Division.

Stenographer, 5 17-30 months, 1 at $1,500.00 .....$ 695.83
Stenographer, 6 13-30 months, 1 at $1,320.00 ..... 707.67

$4,140.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to report that bonds of The Sanitary District of Chicago to the amount of $150,000.00 will mature July 1, 1919.

Your Committee further reports that the semi-annual interest on the ninth, tenth, twelfth, fourteenth, eighteenth, twenty-fifth, twenty-seventh and thirty-first issues of bonds of The Sanitary District of Chicago, amounting to the sum of $84,060.00, will also fall due July 1, 1919, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby instructed to draw a warrant payable to the order of the Treasurer of The Sanitary District of Chicago for the sum of $234,060.00, to pay the principal and semi-annual interest due July 1, 1919, on bonds of The Sanitary District of Chicago as follows:

The principal of 50 bonds of the tenth issue	$ 50,000.00
The principal of 75 bonds of the fourteenth issue	75,000.00
The principal of 25 bonds of the twenty-fifth issue	25,000.00
Total bonds	$150,000.00
Six months' interest on $50,000 of the ninth issue at 4 per cent	$ 1,000.00
Six months' interest on $100,000 of the tenth issue at 4 per cent	2,000.00
Six months' interest on $300,000 of the twelfth issue at 4 per cent	6,000.00
Six months' interest on $375,000 of the fourteenth issue at 4 per cent	7,500.00
Six months' interest on $192,000 of the eighteenth issue, at 4 per cent	3,840.00
Six months' interest on $300,000 of the twenty-fifth issue at 4 per cent	6,000.00
Six months' interest on $636,000 of the twenty-seventh issue at 4 per cent	12,720.00
Six months' interest on $2,000,000 of the thirty-first issue at 4½ per cent	45,000.00
Total interest on bonds	$84,060.00
Grand total	$234,060.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

GEORGE W. PAULLIN,
MATT. A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the advisability of the Sanitary District accepting 4 per cent bonds of the City of Chicago at their face value in payment of the existing judgments due the Sanitary District from said city, on account of work done and labor performed in rehabilitating and extending the street lighting system of said city, and for electrical energy furnished it, which judgments with interest

thereon and taxed costs total the approximate sum of $5,000,000.00.

Your Committee further reports that it is advised by the Attorney that the Sanitary District has the legal right to accept said bonds at their face value in payment of said indebtedness, and your Committee is of the opinion that said bonds should be accepted; and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District be and he is hereby authorized and directed to accept from the proper authorities of the City of Chicago, 4 per cent bonds of said city at their face value in payment of said judgments, interest thereon and taxed costs and to make such adjustments as may be necessary to equalize the amount of bonds received and the indebtedness due the Sanitary District, and when said bonds are so received, to deliver the same to the Treasurer of the Sanitary District, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Attorney be, and they are hereby authorized and directed to execute and deliver for and on behalf of The Sanitary District of Chicago such receipts, acquittances and releases to the City of Chicago as may be necessary to obtain said bonds and to cancel said judgments of record.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the sale of $3,000,000.00 face value of 4 per cent bonds of the City of Chicago a part of the issue of $5,000,000.00 to be received by the Sanitary District in payment of certain outstanding judgments, interest thereon and taxed costs and is of the opinion that it is advisable to dispose of said bonds in that amount, the proceeds of which is to be used for the corporate purposes of the Sanitary District.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to advertise said $3,000,000.00 of 4 per cent bonds of the City of Chicago for sale in such daily and financial papers as they may select.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, Ill., June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 322.73	
John McGillen, Clerk (water taxes)	2.63	
A. Guthrie & Co. (labor and material account of B. & O. C. T. R. R., Calumet-Sag Channel)	1,901.85	
A. Guthrie & Co. (labor and material account of B. & O. C. T. R. R., Calumet-Sag Channel)	1,854.43	
Rogers & Hall Company (printing proposal books)	259.20	
Art Metal Construction Company (cap files)	117.60	
A. Daigger & Co. (electric oven)	60.00	
United States Rubber Company (hip boots)	20.80	
John E. Burns Lumber Company (lumber)	14.67	
Herman H. Hettler Lumber Company (lumber)	12.95	
Josephine Eck (rental of office for month of June, 1919)	8.00	
Hinckley & Schmitt (drinking water)	6.25	
Chicago Towel Company (towel service)	5.25	
Chicago Towel Company (towel service)	1.25	
Public Service Company of Northern Illinois (lighting service)	.50	
The Peoples Gas Light & Coke Company (gas service)	.37	
		$ 4,588.48

Maintenance and Operation Account.

Crane Company (pipe fittings, 39th St. Pumping Station)	$ 122.90	
Hinckley & Schmitt (drinking water, 39th St. Pumping Station)	59.50	
A. Daigger & Co. (laboratory supplies, 39th St. Pumping Station)	48.85	
A. Daigger & Co. (laboratory supplies, 39th St. Pumping Station)	14.80	
Parker's Towel Supply Company (towel service, 39th St. Pumping Station)	11.20	
Stewart Ice Company (ice, 39th St. Pumping Station)	12.00	
The Peoples Gas Light & Coke Company (gas service, Lawrence Ave. Pumping Station)	.65	
Commonwealth Edison Company (Mazda lamps, Lawrence Ave. Pumping Station)	54.19	
Hinckley & Schmitt (drinking water, Lawrence Ave. Pumping Station)	17.00	
Hinckley & Schmitt (drinking water, Lawrence Ave. Pumping Station)	8.50	
L. Gould & Co. (mops, Lawrence Ave. Pumping Station)	5.25	
Parker's Towel Supply Company (towel service, Lawrence Ave. Pumping Station)	5.00	
James H. Rhodes & Co. (sponges, Lawrence Ave. Pumping Station)	2.40	
Stebbins Hardware Company (drills, Lawrence Ave. Pumping Station)	2.34	
Joseph T. Ryerson & Son (steel, Lawrence Ave. Pumping Station)	2.23	
John Naghten & Co. (insurance)	282.75	
Amount carried forward		$ 5,238.04

Amount brought forward		$ 5,238.04
Cement Gun Company (pipe fittings)	84.98	
William O'Connell (hardware supplies)	82.25	
Mears-Slayton Lumber Company (lumber)	56.92	
The Republic Rubber Company (hip boots)	31.77	
Miller Hardware Company (strap hinges)	.25	
Bentley, Murray & Co. (printing forms)	20.50	
Barrett Hardware Company (brace, bit, bolts, etc.)	17.95	
Edinger & Co. (pipe fittings)	17.22	
Geo. B. Carpenter & Co. (lag screws)	16.61	
The Frederick Post Company (scales)	13.10	
The Fred J. Ringley Company (letterheads)	5.00	
Barrett Hardware Company (sheet lead and washers)	3.01	
Burr-Vack Company (carbon paper)	2.00	
Parker's Towel Supply Company (towel service)	1.00	
Stebbins Hardware Company (rulers)	.83	
Keuffel & Esser Company (protractor)	.12	
		1,003.07

Illinois & Michigan Canal and Illinois River Conditions Department.

Commonwealth Edison Company (Mazda lamps)	$ 27.10	
Newton Thompson (repairing chimney and stove)	6.00	
		33.10

Law Department.

Geo. Mulligan (legal services)	$ 960.00	
John McGillen, Clerk (record of Passaic Valley Sewer Case)	20.00	
John McGillen, Clerk (certified copy of letter to Byrne Bros. Dredging & Engineering Company)	1.50	
		981.50

Clerical Department.

Bentley, Murray & Co. (printing payroll sheets, etc.)	$ 108.00	
Burr-Vack Company (office supplies)	15.00	
The Nelson-Eisman-Quist Company (pencils)	15.00	
The Nelson-Eisman-Quist Company (bond paper)	8.00	
Albert Hancock & Co. (drawing pencils)	6.00	
		152.00

Police Department.

John McGillen, Clerk (expenses of employes)		32.94

General Account.

Edmund D. Adcock (professional services, writing brief re Lake Level Controversy)	850.00	
Chicago Herald and Examiner (advertising tax levy)	252.00	
The Chicago Daily Journal (advertising tax levy)	58.80	
The Chicago Daily News Company (advertising tax levy)	30.60	
Old Glory Mfg. Company (wool flag)	16.17	
The Chicago Evening Post Company (advertising for proposals)	12.90	
Aldine Press (printing permits)	12.25	
Walden W. Shaw Livery Company (auto service)	8.50	
South-West Printing Company (printing cards)	8.25	
Standard Oil Company (connecting desk lamps)	1.24	
		1,250.71
Amount carried forward		$ 8,041.80

Amount brought forward		$ 8,041.80

Electrical Department.

John McGillen, Clerk (semi-monthly payroll)	$ 17,312.22	
John McGillen, Clerk (expenses of employes)	643.33	
John McGillen, Clerk (water tax)	39.38	
Monarch Electric & Wire Company (electrical supplies)	312.42	
Central Electric Company (switches)	294.00	
John Naghten & Co. (insurance)	255.85	
Geo. B. Carpenter & Co. (galvanized cloth)	234.70	
Garrett J. Cushing (compensation for personal injury)	200.00	
Commercial Tire & Auto Company (casings)	181.54	
Monarch Electric & Wire Company (wire)	125.14	
Wilbur J. Connell (drills, etc.)	77.48	
Monarch Electric & Wire Company (cable)	64.82	
Wilbur J. Connell (hardware supplies)	62.22	
Wilbur J. Connell (brushes, pumps)	59.40	
Wilbur J. Connell (oil cans)	44.55	
Chicago Telephone Company (service)	49.60	
Garrett J. Cushing (compensation for personal injury)	39.00	
Tungsten Mfg. Company (miscellaneous electrical supplies)	20.97	
Commonwealth Edison Company (wire)	17.28	
American Blue Print Paper Company (drafting work)	13.97	
Joseph T. Ryerson & Son (galvanized sheets)	9.69	
L. Gould & Co. (paper)	8.33	
The Berkshire Co. (kraft bags)	8.15	
L. L. Fleig & Co., Inc. (black fibre, smooth sawed)	7.53	
Weil Bros. (black pipe)	.52	
		20,082.09

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 7.69		
Clerical Department	39.70		
Electrical Department	1.95		
		$ 49.34	
American Blue Print Paper Co. (blue printing)—			
Construction Account	$ 447.81		
Maintenance and Operation Account	12.76		
Law Department	.53		
Real Estate Department	.15		
General Account	7.26		
		468.51	
American Blue Print Paper Co. (blue printing)—			
Construction Account	$ 195.54		
Maintenance and Operation Account	88.57		
Law Department	9.72		
General Account	11.30		
		305.13	
The Frederick Post Company (drafting supplies)—			
Construction Account	$ 323.20		
Maintenance and Operation Account	22.46		
		345.66	
			1,168.64
Grand Total			$ 29,292.53

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEO. W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel *(except as to vouchers to Edmund D. Adcock, for professional services rendered, in writing brief in re Lake Level controversy, for $850.00, and to George F. Mulligan, for legal services, for $960.00, on which Mr. Sergel voted "nay")*, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance *(except as to vouchers to Edmund D. Adcock, for professional services rendered, in writing brief in re Lake Level controversy, for $850.00, and to George F. Mulligan, for legal services, for $960.00, on which Mr. Nance voted "nay")* and Paullin—Seven on all vouchers, and nine on all vouchers with the exceptions above noted.

Nays — None *(except as above shown)*.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 19, 1919.

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to draw a warrant payable to Lawrence F. King, Clerk, in the sum of $20,000.00 to be delivered to him and used by him to meet emergency and force account payrolls and to obtain the benefit of discounts on current vouchers.

Respectfully submitted,

JAS. H. LAWLEY,
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Commitee on Engineering.

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has on June 5, 1919 (page 713 of the Proceedings) presented a report to the Board setting out the activities of the Sanitary District with reference to the construction of a bridge across the south branch of the Chicago river at Twelfth street and presenting the details of a new layout prepared by the Bureau of Engineering of the City of Chicago for the construction of a single leaf bascule bridge providing a 140-foot navigable channel at said point, which said layout since the adoption of said report has been changed so as to provide for an enlargement of the cross sectional area of the by-pass west of the abutment of said new bridge. Said report of your Committee was accompanied by an order of the Board which was adopted on said date, approving said new layout "provided, however, that the City of Chicago shall make a reasonable showing that the straightening of the south branch of the Chicago River can be brought about within a reasonable time, thereby making said single leaf bascule bridge of temporary use."

Your Committee further reports that a certified copy of said resolution was transmitted to his Honor, the Mayor of said City of Chicago and the City Council and your Committee herewith transmits to the Board a communication from Charles R. Francis, Commissioner of Public Works of said City, acknowledging receipt of said certified copy and stating in reply thereto that "The City

of Chicago has through plans and models shown that a single leaf bascule bridge with a by-pass and 140-foot clear channel for navigation is to be of temporary use until the straightening of the south branch of the Chicago River is finally adopted, in which event the bridge will be modified to meet the new conditions."

Your Committee having considered said communication is of the opinion that under the circumstances the City of Chicago has made a reasonable showing that the straightening of the south branch of the Chicago River can be brought about within a reasonable time, thereby making said single leaf bascule bridge of temporary use and that the new layout for the construction of said bridge should be approved and therefore recommends the passage of the following order:

Ordered, That the Sanitary District hereby approves the new layout prepared by the Bureau of Engineering of the City of Chicago for the construction of a single leaf bascule bridge across the south branch of the Chicago River at Twelfth street, which new layout was described in detail in the report of your Committee approved by the Board on June 5, 1919, except as changed in the particulars above described.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
PATRICK J. CARR,
JAS H. LAWLEY,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the original plans for the excavation and collateral work on contract section 5 of the Calumet-Sag Channel included the riprapping of Milk Creek for a distance of about 700 feet back on certain real estate owned by Patrick H. Caraher. That the contractor for said work was unable to perform said work due to the fact that it could not obtain the right from the tenant of Mr. Caraher to go upon said land. He further states that on September 20, 1917 (page 1295 of the Proceedings), the Board authorized him to expend the sum of $5,000.00 in doing said work and that about $2,000.00 of said sum was expended in removing stumps and debris and by excavating a clear channel, but it was not possible at that time to perform the riprap work in question.

He further states that when the connection between Milk Creek and the Calumet-Sag Channel is opened up, the water in the creek will be drawn down so rapidly that high velocities will be caused, resulting in the caving and washing of the banks unless some means are taken to prevent this, and he recommends that instead of riprapping the bottom of the creek, a small concrete dam be constructed across the bottom of the creek at the south right of way to prevent the scouring of the bottom and sides at an estimated cost of $500.00. He requests that authority be granted him to order Edward J. Hanrahan, who is now doing work in constructing outfalls along the Calumet-Sag Channel, to do said work.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to order Edward J. Hanrahan to perform the work above specified, provided the cost of the same shall not exceed the sum of $500.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
H. E. LITTLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the City of Chicago has from time to time considered various plans for the construction of a subway through the downtown district, and if any such subway is constructed it will necessitate remodeling the existing sewer system, which will unavoidably be affected thereby. He further states that the questions involved have been informally discussed with the Engineers of the City Sewer Department in the past, but considerable study should now be undertaken in order to be prepared to make suggestions and recommendations to the Engineers planning said subway and he requests that he be granted authority to undertake said work and co-operate in every way with said Engineers and the officials of said city.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to undertake the work above specified and to co-operate with the Engineers of the Sewer Department of the City of Chicago and officials of said city in solving the sewer problems involved in constructing said subway.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT. A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Commitee on Electrical Development:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that by the terms of the existing contract between the Sanitary District and the Chicago & West Towns Railway Company said company is limited in its

use of electrical energy to certain hours of the day and has requested permission to use said electrical energy during other hours when said use will not interfere with the supply of electrical energy to other consumers.

The Electrical Engineer further states that the use of additional electrical energy at the present time will not interfere with the supply to other consumers and will result in an increased income to the Sanitary District.

Your Committee having considered the matter is of the opinion that the request of said company should be granted, and therefore recommends the passage of the following order:

Ordered, That the existing contract between the Sanitary District and the Chicago & West Towns Railway Company be modified to permit said company to use electrical energy during such hours and period of time as shall be authorized by the Electrical Engineer and that whenever he is of the opinion that it is not to the advantage of the Sanitary District to permit said consumer to use such electrical energy he shall notify said company and said company shall thereupon cease to use said additional electrical energy.

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT. A. MUELLER,
WALLACE G. CLARK.
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the following contracts for residence lighting have been executed by him:

Mrs. C. S. Buckley, 177 Oak street.
August Marx, 314 State street.
Mrs. A. Goeing, 663 Western avenue.
C. E. Dagena, 386 Davis street.
All in Blue Island, Ill.
Geo. T. Tucker, 6909 34th street.
W. B. White, 3422 Ivision avenue.
Paul B. Marek, 3430 Elliot avenue.
All in Berwyn, Ill.
M. Povelka, 39th street and Powell avenue.
Louis Arrigoni, Ogden avenue and Barry Point.
All in Lyons, Ill.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the action of the Electrical Engineer in executing the contracts for residence lighting with the parties above mentioned be and the same is hereby ratified and confirmed.

Respectfully submitted

H. E. LITTLER,
Chairman.

MATT A. MUELLER,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents a new contract with the Illinois Packing Company, 938 West 37th place, wherein the Sanitary District agrees to furnish 150 kilowatts of electrical energy on an off peak basis, which said company agrees to take upon the terms and conditions set forth in said contract. Said contract has been approved by the Electrical Engineer.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the attached contract with the Illinois Packing Company, the same having been properly executed by it

Respectfully submitted,

H. E. LITTLER,
Chairman.

MATT A. MUELLER,
WALLACE G. CLARK,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, June 19, 1919.

To the Honorable, the President and The Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Police Department.

George Reichardt, patrolman (vacation period), $100.00 per month.

Electrical Department.

Emil Lind, oiler (vacation period), $125.00 per month.

Andrew McEwan, oiler (vacation period), $125.00 per month.

Engineering Department.

George P. Horn, rodman, $100.00 per month.

Albert J. Clifford, timekeeper, $110.00 per month.

Richard Przybyla, watchman, $110.00 per month.

Harry Lindquist, mechanic, 60c per hour.

Patrick Carlin, well digger, 77½c per hour.

Mike Burke, well digger, 77½c per hour.

Pete Lannon, windlassman, 67½c per hour.

Tom Walsh, windlassman, 67½c per hour.

REINSTATEMENT.

Police Department.

Tony Alessi, patrolman (vacation period), $125.00 per month.

INCREASES.

Engineering Department.

Chas. M. Hopfer, from sub-foreman at 50c per hour to foreman at $5.50 per day.

Edward Welsh, from laborer at $4.00 per day to rough carpenter at $4.50 per day.

Laborers (within Chicago city limits), from 45c per hour to 50c per hour.

Laborers (North Shore Channel, Blue Island and Summit), from $4.00 per day to $4.50 per day.

Laborers (Main Channel south of Willow Springs), from 45c per hour to 50c per hour.

Electrical Department.

Laborers, from 45c per hour to 50c per hour.

REINSTATEMENTS.

Due to Honorable Discharge from U. S. Army Service.

Engineering Department.

J. J. Newman, assistant engineer, $225.00 per month.

Patrick J. McEvoy, rodman, $115.00 per month.

James A. Loftus, laborer, 50c per hour.

Theo. Davidenko, laborer, 50c per hour.

TRANSFERS.

Electrical Department.

Theo Frantz, from fireman at $100.00 per month to laborer at 50c per hour.

Patrick Connors, from fireman at $100.00 per month to laborer at 50c per hour.

T. O'Connell, from fireman at $100.00 per month to laborer at 50c per hour.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
MATT A. MUELLER,
H. E. LITTLER,
JAS. H. LAWLEY,
WALLACE G. CLARK,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Passed and not voting—Mr. Sergel—One.

Rules.

Mr. Paullin presented the following report from the Committee on Rules:

CHICAGO, June 19, 1919.

To the Honorable, the President and The Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Rules reports that on June 5, 1919 (page 744 of the Proceedings), the Board referred to your Committee an ordinance amending the Rules and Regulations of the Board, so as to provide that during the months of July, August and September of 1919, and during the months of May, June, July, August and September of each year thereafter, the regular meetings of the Board shall be held at 2:00 o'clock P. M. sharp on the first and third Thursday of each of said months.

Your Committee further reports that it has considered said ordinance and is of the opinion that said amendment to the rules should be made.

Your Committee herewith transmits to the Board the ordinance above referred to and recommends the passage of said ordinance.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
WM. J. HEALY,
PATRICK J. CARR,
Committee on Rules.

Mr. Paullin moved that the ordinance be passed.

Mr. Sergel suggested that said ordinance be further amended by inserting the words "unless otherwise ordered by the Board" before the word "regular" in line thirty-three, and by striking out the word "sharp" in line thirty-six of the first column on page 1414 of the Proceedings of October 21, 1915.

The suggestion was accepted and the ordinance was amended accordingly.

On roll call the ordinance, as amended, was passed by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the ordinance as passed:

AN ORDINANCE

Amending an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on October 28, 1915, "Providing Certain Rules and Regulations and Rules of Order of the Board of Trustees of The Sanitary District of Chicago," as Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago December 23, 1915, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on December 1, 1916, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on January 4, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on January 11, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on January 18, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on April 5, 1917, as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on May 3, 1917, and as Further Amended by an Ordinance Passed by the Board of Trustees of The Sanitary District of Chicago on July 12, 1917.

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. That Section 1 of an ordinance passed by the Board of Trustees of The Sanitary District of Chicago on October 28, 1915, as amended, be, and the same is hereby further amended by inserting the words "unless otherwise ordered by the Board" before the word "regular" in line thirty-three, and by striking out the word "sharp" in line thirty-six of the first column of page 1414 of the Proceedings of October 21, 1915, and adding in lieu thereof the following words and figures, to-wit:

"Provided that during the months of July, August and September, 1919, and during the months of May, June, July, August and September of each year thereafter said regular meetings shall be held at 2:00 o'clock P. M. on the first and third Thursdays of each of said months."

SEC. 2. This ordinance shall be in force and effect from and after its passage.

Real Estate Development.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, June 19, 1919.

To the Honorable, the President and The Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Real Estate Development reports that in the year 1917 taxes were spread against the property of the Sanitary District within Cook County outside of the territorial limits of the Sanitary District in the towns of Lyons, Palos and Lemont along the Main Channel of the Sanitary District, and in the towns of Worth, Palos and Lemont along the Calumet-Sag Channel; but thereafter, as a result of a petition filed by the Law Department, all such taxes were marked "exempt" upon the books of the Assessor and Collector. In the year 1918, re-

lying upon the action of the Board of Review, no investigation was made as to such taxes by the Real Estate Department. It appears, however, that either the Board of Assessors or the Board of Review reversed the action of the Board of Review for the year 1917 and in the year 1918 taxes have been levied and spread against each tract and parcel of land along the Main Channel outside of the Sanitary District in the towns of Palos and Lemont and each tract and parcel along the Calumet Sag Channel outside of the Sanitary District in the towns of Worth, Palos and Lemont, and against three lots in the town of Lyons along the Main Channel. In addition, for the year 1918 personal property taxes have been levied and spread against the Sanitary District in School Districts 112, 113 and 180 in the town of Lemont and were also spread in said districts for the years 1916 and 1917 and still remain unpaid.

Your Committee having considered the matter and having taken the advice of the Attorney, is of the opinion that there is at least a legal question as to whether the lands along the Main Channel, including the Main Channel and the right of way outside of the Sanitary District within Cook County, are taxable; and it is of the opinion that the lands included in the Desplaines River in Cook County outside of the Sanitary District are not taxable; and it is of the opinion that the lands included within the right of way, including the channel of the Calumet-Sag Channel, are not taxable, and that no personal property taxes can be collected against the Sanitary District in any school district in Cook County outside of the territorial limits of the Sanitary District where the Sanitary District owns no personal property; and it therefore recommends the passage of the following order:

Ordered, That the Attorney for the District be and he is hereby instructed to resist the payment of such taxes and that he be and is hereby directed to take such legal steps as are necessary to resist the payment of such real estate and personal property taxes for the year 1918 and such personal property taxes for previous years.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
WM. J. HEALY,
MATT A. MUELLER,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Francis A. Hardy, referring to the condition of the property of the Sanitary District at the corner of Lawrence avenue and the North Shore Channel, stating that said property opposite the Home for Boys was unsightly and requesting that it be improved.

Referred to the Committee on Engineering.

Mr. Paullin presented a communication from Hon. H. P. Pearsons, Mayor of the City of Evanston, stating that at the meeting of the City Council held on June 17th he was requested to ask a permit from the Sanitary District for the use of its land along the banks of the North Shore Channel from Emerson to Isabella streets, to be used as a municipal golf course for the people of Evanston.

Mr. Paullin moved that the request be granted in such form as the Law Department deems advisable.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark,

Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Paullin presented the following communication and order:

CHICAGO, June 19, 1919.

To the Honorable, the President and The Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—On the 29th day of March, 1917, the Board of Trustees adopted preambles and a resolution, Proceedings 1917, pages 510-511.

The preambles stated in substance that the officers of the United States army stationed at Chicago had requested the corporate authorities of the Sanitary District to co-operate with the United States army in carrying out orders for safeguarding public works of the Sanitary District as well as other public works at Chicago; that approximately six weeks before that time the Chairman of the Committee on Employment requested the Chief Engineer, Electrical Engineer and Marshal of the District to increase the number of guards upon all public works of the Sanitary District, and to cancel all permits to enter same theretofore issued, and that no one be permitted to enter any pumping station, electrical substation or other works of the Sanitary District without a special permit officially signed, and such action was taken by the Engineers and the Marshal; that in order to make such co-operation legal and effective, it was necessary that someone be duly authorized by the Board of Trustees of the Sanitary District to take full charge of the subject matter and to confer from time to time with such Federal authorities and to formulate plans in conjunction with such Federal authorities for the purpose of safeguarding the public works of the Sanitary District.

It was resolved that Trustee George W. Paullin be authorized and directed to take all necessary steps to fully and completely safeguard the public works of the Sanitary District, and to confer from time to time with officers of the United States army and to formulate plans to bring about and accomplish full and complete co-operation in safeguarding such public works.

Recently a communication was sent to the officers of the United States army stationed at Chicago giving the substance of said preambles and resolution, and stating that they have ever since been carefully adhered to in every sense, but that it seems that present conditions would warrant at least a modification, if not the entire repeal, of said preambles and resolution, but before presenting any order to that effect to the Board the Federal authorities were requested to give their views in the matter so that any proposed order of modification might be presented with their consent. They promptly replied that the action of the Board might well be modified, so long as proper restrictions are enforced to guard against lawless acts. It is, therefore,

Ordered, That the preambles and resolution aforesaid be modified as follows:

That the Chief Engineer of The Sanitary District of Chicago be, and he is hereby authorized to issue permits for boats to pass through the locks of the Sanitary District channels and for fishing at 39th street, and to permit the use of the Sanitary District boats for excursion parties, provided, however, that said Chief Engineer shall not issue any of such permits unless he is satisfied in each and every case that in doing so the property and works of the Sanitary District shall not be thereby endangered.

Respectfully submitted,

GEORGE W. PAULLIN.

Mr. Paullin moved that the order be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Paullin stated that he desired to address the Board on a matter which he considered important, and, inasmuch as his address would consume more than ten minutes and the Rules of the Board provide that no member without leave of the Board shall speak longer than ten minutes at any time except by consent of the Board, moved that the Rules be suspended for the purpose of permitting him to address the Board for a period of time in excess of ten minutes.

The motion prevailed.

Mr. Paullin stated that he desired to speak to a question of personal privilege.

The Chair recognized Mr. Paullin and requested him to state his question of personal privilege.

Mr. Paullin stated that he desired to talk on the bill introduced in the General Assembly of the State of Illinois by Representative Lee O'Neill Browne inimical to the interests of The Sanitary District of Chicago.

The Chair ruled the question proper. Mr. Paullin then addressed the Board.

ADJOURNMENT.

Mr. Clark moved that the Board adjourn.

The motion prevailed.

L. F. Kaiser

Clerk.

628.09773
C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, JUNE 26, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Absent—Mr. Paullin—One.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of June 12, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of May, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT

FOR MAY, 1919.

Receipts.

Balance on hand at date of last report		$226,310.45
Electrical Department	$ 68,631.57	
County Collector	500,000.00	
Alfred Popp, Collector, Town of Proviso	8,915.17	
Taxes on District Property	6,593.80	
The Albert Dickinson Company	5,681.98	
Thomas P. Garland	3,621.61	
Land Revenue	1,232.63	
Bills Receivable (United States Crushed Stone Co.)	333.33	
Police Department	125.00	
General Account	120.25	
Law Department	14.00	
Interest on Bank Balance, Geo. M. Reynolds, Treasurer	818.36	
Total cash received for month		596,087.70
		$822,398.15

Expenditures.

Engineering Department, Construction Account	$200,354.46	
Engineering Department, Maintenance and Operation Account	39,725.77	
Illinois & Michigan Canal & Illinois River Conditions Department	3,028.11	
Law Department	13,156.01	
Land Damages	239.30	
Cost of Law Cases	1,220.00	
Clerical Department	4,433.69	
Treasury Department	312.48	
Real Estate Department	732.64	
Police Department	8,584.66	
General Account	11,750.07	
Electrical Department	71,615.17	
Taxes on District Property	61,722.83	
Total cash disbursed	$416,875.19	
Balance on hand this date as per schedule	405,522.96	
		$822,398.15

G. M. REYNOLDS,
Treasurer.

Chicago, June 26, 1919.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that by the terms of Section 11 of an agreement dated October 27, 1910, page 1115 of the Proceedings, between the Sanitary District and the City of Chicago relating to the rehabilitation, extension and operation of the electric street lighting system of said city and the furnishing of electrical energy therefor, the Sanitary District agreed to construct at least three additional sub-stations to be used in connec-

tion with said electric street lighting system.

Your Committee further reports that in order to carry out the terms of said agreement, the Board on September 1, 1911 (page 929 of the Proceedings) authorized the purchase of the real estate described under (A) of the attached order, and also on December 14, 1911 (page 1453 of the Proceedings) authorized the purchase for a similar purpose the real estate described under (B) of the attached order; that said pieces of real estate were purchased in accordance with the terms of said orders and the fee simple title thereto was taken in the name of the Sanitary District, and the Sanitary District erected on each of said pieces of real estate a sub-station known respectively as the Byron street sub-station and the West 22nd street sub-station.

Your Committee further reports that by the terms of an agreement dated January 1, 1918 (page 609 of the Proceedings for the year 1919) between the Sanitary District and the City of Chicago, the Sanitary District specifically delivered and transferred to said city the possession and use of said sub-stations, together with all the electrical equipment which was installed therein under the terms and conditions of said agreement above referred to, dated October 27, 1910, and four supplementary and amendatory agreements thereto, but the title of record to said pieces of real estate on which said sub-stations were constructed and said electrical equipment installed, still remains in the Sanitary District and the City of Chicago has requested that said legal title be conveyed to it.

Your Committee having considered the matter is of the opinion that said conveyance should be made and, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in the name of and for and on behalf of the Sanitary District warranty deeds conveying to the City of Chicago the following described pieces and parcels of land, to-wit:

(A)

Lots twenty-three (23) and twenty-four (24) in sub-block two (2) in H. C. Buechner's sub-division of block two (2) in the sub-division of section nineteen (19), township forty (40) north, range fourteen (14) east of the third principal meridian; except the southwest quarter (¼) of the northeast quarter (¼) and the southeast quarter (¼) of the northwest quarter (¼) and east half (½) of the southeast quarter (¼) thereof, located in Chicago, Cook County, Illinois.

(B)

Lots nineteen (19) and twenty (20) in the resub-division of block twenty-one (21), Douglas Park Addition to Chicago, in the east half (½) of the southeast quarter (¼) south of Ogden avenue, of section twenty-three (23), and lots four (4) and five (5) of Circuit Court partition of the west half (½) of section twenty-four (24), township thirty-nine (39) north, range thirteen (13) east of the third principal meridian, located in Chicago, Cook County, Illinois,

together with all the electrical equipment which was installed in the sub-stations erected upon said respective pieces and parcels of property under the terms and conditions of said agreement between the Sanitary District and the City of Chicago, dated October 27, 1910, and four supplementary and amendatory agreements thereto.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (page 114 of the Proceedings) sets up in the Department of Engineering (Item 5) one position with a salary of $3,000.00, and under the Outlet and Intercepting Sewer Construction Division (Item 8) of said Department, two positions with salaries attached thereto (page 115 of the Proceedings), totalling the sum of $2,760.00, which positions and salaries are set forth in the order hereto attached.

Your Committee reports further that the Committee on Employment has requested that the salaries attached to said positions be adjusted to meet the requirements of the Department of Engineering, which can be done without increasing the respective sums of $3,000.00 and $2,760.00 heretofore appropriated.

Your Committee having considered said request is of the opinion that same should be granted and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make adjustments of the salaries set up under the Department of Engineering in the appropriation bill for the year 1919 in accordance with the requirements of the Committee on Employment as follows:

DEPARTMENT OF ENGINEERING
ACCOUNT NO. II
SALARIES AND WAGES OF REGULAR EMPLOYES

Change from

(*Sanitary Division*)
Assistant Engineer,
1 at $3,000.00 ..... $3,000.00
(*Outlet and Intercepting Sewer Construction Division*)
Inspectors,
2 at $1,380.00 ..... 2,760.00

$5,760.00

to

(*Sanitary Division*)
Assistant Engineer, at the rate of $250.00 per month,
1 at $2,100.00 ..... $2,100.00
Chemical Assistants, at the rate of $100.00 per month,
for 3 months, 3 ..... 900.00
(*Outlet and Intercepting Sewer Construction Division*)
Inspectors at the rate of $115.00 per month, 2 ..... 1,915.00
Sub-Instrumentman, at the rate of $130.00 per month
for 6½ months, 1 ..... 845.00

$5,760.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has agreed with George Koller and Hilda J. Koller, his wife, to purchase from them, for the sum of $2,700.00, the following described real estate, to-wit:

That part of the north sixty (60) feet of the east four hundred sixteen (416) feet, lying east of Thornton road (now Michigan avenue) of block one (1) in Warren's addition to Wildwood, being a sub-division of part of the northeast quarter and part of the southeast quarter of section twenty-eight (28), township thirty-seven (37) north, range fourteen (14) east of the third principal meridian, south of the Indian Boundary line, situated in the City of Chicago, County of Cook and State of Illinois,

to be used as part of the site of the Calumet Sewage Pumping Station.

Your Committee having considered said purchase, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant in the sum of $2,700.00 payable to George Koller and Hilda J. Koller, his wife, and deliver the same to them or to the Registrar of Titles of Cook County for them to be delivered to them upon the delivery to the Sanitary District of a certificate from said Registrar showing the title to said property in fee simple in the Sanitary District under the provisions of the Torrens Act.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of June, 1919.

L. F. King, Clerk (general payroll)		$ 28,750.18

Construction Account.

John McGillen, Clerk (expenses of employes)	$ 138.63	
John McGillen, Clerk (expenses of employes)	76.68	
John McGillen, Clerk (expenses of employes)	57.29	
John McGillen, Clerk (recording document)	2.05	
Amounts carried forward	$ 274.65	$ 28,750.18

Amounts brought forward	$ 274.65	$ 28,750.18
E. A. Hanrahan (labor and material account of Calumet-Sag Channel)	475.00	
Rogers & Hall Company (pages for proposal book)	367.77	
Chicago Title & Trust Company (drawing abstract)	175.00	
		1,292.42
Maintenance and Operation Account.		
Abe Burrell & Co. (repairing scows Nos. 1 and 2)	$ 1,266.09	
The Black Diamond (advertising, Lawrence Ave. Pumping Station)	13.75	
New York Belting & Pkg. Company (garden hose, 39th St. Pumping Station)	20.00	
L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	153.40	
L. F. King, Clerk (special roll, 39th St. Pumping Station)	132.00	
		1,585.24
Law Department.		
F. H. Stephens (reporting case of Zuidena vs. District)	$ 709.00	
John Naghten & Co. (insurance)	84.00	
Riddle & Wunderle Company (blue legal covers, etc.)	28.95	
Walden W. Shaw Livery Company (automobile service)	.95	
		822.90
Real Estate Department.		
The Chicago Real Estate Board (valuation certificate)		125.00
General Account.		
Standard Oil Company (rent for month of June)	$ 2,637.54	
Leland Hotel (expenses of Asst. Attorney Ross C. Hall)	35.40	
Parker's Towel Supply Company (towel service)	26.00	
20th Century Press Clipping Bureau (clippings)	4.00	
		2,702.94
Electrical Department.		
John McGillen, Clerk (expenses incurred re trip on inspection of the Sanitary District channel)	$ 46.00	
General Electric Company (cable)	6,229.75	
Wm. Heggie (Pump)	439.00	
Jeffery-Dewitt Insulator Company (J-D units)	282.57	
The Ohio Brass Company (insulators)	280.90	
Phoenix-Hermetic Company (return of deposit on contract)	200.00	
United States Fidelity & Guaranty Company (insurance)	122.50	
Union Petroleum Company (gasoline)	115.83	
Bentley, Murray Company (printing)	105.00	
Union Petroleum Company (gasoline)	96.35	
Riddle & Wunderle Company (binders)	96.00	
The Faultless Anchor Company (Faultless anchors)	81.50	
Trumbull Waste Mfg. Company (white cotton waste)	76.86	
General Electric Company (current transformers)	76.80	
American Supply Company (sanitary wipers)	72.99	
The Kellogg-Mackay Company (galvanized nipples, etc.)	63.18	
Commonwealth Edison Company (wire)	60.00	
Barrett Hardware Company (mild steel, etc.)	97.25	
Stebbins Hardware Company (pliers, etc.)	51.63	
Commonwealth Edison Company (lamp guards, etc.)	41.43	
Chicago Telephone Company (telephone service)	27.96	
Buchanan-Daley Company (lumber)	27.89	
G. Johnson (teaming)	27.00	
Wadsworth-Howland Company (white lead, etc.)	25.58	
Amounts carried forward	$ 8,743.97	$ 35,278.68

Amounts brought forward	$ 8,743.97	$ 35,278.68
Jas. E. Rhodes & Co. (soapstone)	24.00	
The Texas Company (oil and gasoline)	24.00	
Steele, Wedeles Company (soap, etc.)	20.80	
Overland Motor Company (clutch cone, etc.)	20.75	
Triple Action Spring Company (front springs)	17.00	
Theo. B. Robertson Products Company, Inc. (soap powder)	15.62	
The Fred J. Ringley Company (printing)	15.00	
Chicago Telephone Company (telephone service)	14.45	
Burr-Vack Company (copy books, etc.)	14.20	
Parker's Towel Supply Company (towel service)	13.50	
Monarch Electric & Wire Company (conduit)	13.43	
Geo. B. Carpenter & Co. (coach candles)	12.00	
Standard Oil Company (gasoline)	11.50	
South-West Printing Company (statement blanks)	11.00	
Crane Company (brass pipe, etc.)	10.78	
H. Channon Company (brass ejector, etc.)	10.50	
Humphrey & Sons (tool steel casting)	10.50	
Shavings & Sawdust Company (sawdust)	6.50	
Henry Stuckart (hangers, etc.)	5.75	
Geo. B. Carpenter & Co. (repairs on car 501)	5.37	
Western Lumber Company (lumber)	5.38	
United Asbestos & Packing Company (grease cups)	4.50	
Western Electric Company (condulet bodies)	3.34	
The L. S. Starrett Company (socket wrenches)	2.29	
Exide Battery Depots, Inc. (insulators)	2.11	
American Blue Print Paper Company (blue prints)	1.15	
		9,039.39

Miscellaneous Accounts.

John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 58.17		
Maintenance and Operation Account	134.42		
General Account	22.30		
		$ 214.89	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 113.72		
Law Department	6.28		
		120.00	
John McGillen, Clerk (expenses of employes)—			
Construction Account	$ 34.94		
Maintenance and Operation Account	54.34		
		89.28	
John McGillen, Clerk (repairs to controlling works, etc.)—			
Construction Account	$ 683.60		
Maintenance and Operation Account	3,187.58		
		3,871.18	
L. F. King, Clerk (special roll, 39th St.)—			
Maintenance and Operation Account	$ 128.00		
Electrical Department	96.00		
		224.00	
			4,519.35
Grand Total			$ 48,837.42

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

SUSPENSION OF REGULAR ORDER OF BUSINESS.

Mr. Clark moved that the regular order of business be suspended to consider a resolution suggesting amendments to a certain ordinance before a sub-committee of the Committee on Railway Terminals of the City Council, which is now in session, defining the future needs of the Sanitary District at the Thirty-ninth St. Pumping Station.

The motion prevailed.

Mr. Clark presented the following resolution:

WHEREAS, A sub-committee of the Committee on Railway Terminals of the City Council of the City of Chicago has now under consideration a proposed ordinance entitled:

"AN ORDINANCE

For the Establishment of Harbor District Number Three; the Construction by the Illinois Central Railroad Company of a New Passenger Station; Electrification of Certain of the Lines of the Illinois Central and Michigan Central Railroad Companies within the City; and the Development of the Lake Front."

AND WHEREAS, Said sub-committee at a hearing on the 24th day of June, A. D. 1919, approved and adopted the following amendments to Section 18 of said proposed ordinance, to-wit:

"Amend Section 18 by striking out all after the word 'shall' at the end of the eleventh line of said section, and insert in lieu thereof the following:

(a) At all times provide a suitable and adequate waterway not less than one hundred (100) feet wide at its narrowest point, to supply water to said pumping station;

(b) Allow the City or The Sanitary District of Chicago under its contract with the City, access, for vehicles and traffic, to said pumping station, over the Oakwood Boulevard viaduct and approaches thereto and across the lands of the Commissioners;

(c) Grant to the City or The Sanitary District of Chicago under its contract with the City, the use of a tract of land described as follows:

Beginning at the intersection of the boundary line between the lands of the Commissioners and the lands of the Central Company with the north line of the land occupied by said pumping station; thence east along said north line a distance of three hundred (300) feet; thence northerly and parallel with said boundary line a distance of two hundred and fifty feet; thence westerly and parallel with said north line to a point one hundred (100) feet easterly from said boundary line; thence northerly and parallel with said boundary line, a distance of one hundred (100) feet; thence westerly and parallel with said north line to a point fifty (50) feet easterly from said boundary line; thence northerly and parallel with said boundary line to the south line of East Thirty-seventh street extended east; thence westerly along said south line of East Thirty-seventh street, a distance of fifty (50) feet, more or less, to said boundary line, and thence southerly along said boundary line to the point of beginning,

for the maintenance of tracks, loading and unloading facilities thereon, and for such other purposes connected with the operation of said pumping station as the City may, from time to time hereafter determine."

AND WHEREAS, In the judgment of

the Board of Trustees of The Sanitary District of Chicago underground works and facilities supplemental to said pumping station will at an early day become necessary;

AND WHEREAS, Such works and facilities can be most advantageously located and efficiently operated immediately south of and adjoining said pumping station;

AND WHEREAS, The construction, maintenance and operation of such works and facilities will in no way restrict, hamper or impair park development or the use of any land adjoining said pumping station for park purposes, nor will the operation of such works and facilities be objectionable in the slightest degree.

AND WHEREAS, The location of such works and facilities contiguous to said pumping station will effect a very considerable saving of public money;

AND WHEREAS, In the opinion of counsel, for adequate legal reasons, the right to locate such works and facilities immediately south of said pumping station should now be reserved to the City of Chicago in said proposed ordinance;

NOW, THEREFORE, BE IT RESOLVED, By the Board of Trustees of The Sanitary District of Chicago that the honorable, the Sub-Committee of the Committee on Railway Terminals of the City Council of the City of Chicago, which now has the proposed ordinance entitled:

"AN ORDINANCE

For the Establishment of Harbor District Number Three; the Construction by the Illinois Central Railroad Company of a New Passenger Station; Electrification of Certain of the Lines of the Illinois Central and Michigan Central Railroad Companies within the City; and the Development of the Lake Front."

under consideration be, and it is hereby respectfully requested further to amend Section 18 of said proposed ordinance by adding thereto an additional paragraph substantially as follows:

"(d) Grant to the City a tract of land, not exceeding five hundred (500) feet in extent from East to West, nor twenty-six hundred (2,600) feet from North to South, immediately South of and contiguous to the land upon which said pumping station is situate, east of and adjoining the boundary line between the lands of the Commissioners and of the Central Company, for such underground works or facilities as the City may hereafter determine; provided, that such works and facilities are constructed and maintained in such a manner that will not restrict or impair park development over the same, nor the use of such tract of land for park purposes, and provided that such underground works and facilities shall be constructed in a manner approved by the Commissioners."

Mr. Clark moved that the resolution be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler and Mueller—Six.

Nays—Messrs. Sergel and Nance—Two.

The Board resumed the regular order of business.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 26, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, having had under consideration the history of the growth and development of the Sanitary District and its various works, respectfully recommends the adoption of the following preambles and order:

WHEREAS, It appears from the Sanitary District Act passed by the Gen-

eral Assembly of Illinois in 1889, and from the decisions of the Supreme Court of Illinois in regard to said Act and parts thereof, that the boundaries of the Sanitary District are not coterminus with those of the City of Chicago or any other municipality, nor are the persons or property within its limits the same as those within the limits of the City of Chicago, or of any other municipality; that the Sanitary District was organized pursuant to an affirmative vote of the electors within its limits as a municipal corporation for sanitary purposes, entirely distinct from and independent of the government of the City of Chicago, and of that of every other municipal corporation; that it has municipal authorities of its own, elected by the people within the District pursuant to the requirements of its Charter, whose functions are in no wise connected with any other municipal government; that the Sanitary District law was not forced upon an unwilling community;

That the preservation of health is one of the paramount objects of government; that it belongs to the police power, subject to the proper exercise thereof by the State Legislature directly or by public corporations to which the legislature may delegate it, and that every citizen holds his property subject to such police power; that the question of the propriety of the organization of this Sanitary District is one which belongs entirely to the General Assembly which created The Sanitary District of Chicago and invested it with power to levy taxes, to issue bonds and to carry on the objects and purposes of the Act, and to construct the works contemplated by the Act by such means and methods as should from time to time be adopted and used by the Board of Trustees in the exercise of sound judgment and discretion in regard thereto;

That The Sanitary District of Chicago was organized as a municipal corporation to secure, preserve and promote the public health, and any subsidiary measure having a greater or less tendency to promote that object or to advance the general scheme proposed through the agency of such organization to preserve and protect the public health is germane to the general subject of the Sanitary District Act, and the object and purpose of The Sanitary District of Chicago; that it appears as a historical fact and a fact abundantly shown by the terms of the Sanitary District Act itself that the scheme contemplated by the Sanitary District Act was formulated mainly, if not exclusively, with reference to sanitary conditions and the needs of the City of Chicago and its environs; that Chicago at the time of the adoption of the Sanitary District Act was a City of probably a million inhabitants, or more, and now has approximately three times that population, that it was and is bordered on the shores of Lake Michigan, which Lake was and is the source of its water supply; that a few miles west of Chicago, and running in a north and south direction is the Des Plaines River, and at a point opposite the southerly part of Chicago said river turns towards the southwest and runs in that direction to the City of Joliet, below which it is known as the Illinois River; that the territory between Lake Michigan and the DesPlaines River and along the course of that river to Joliet is nearly level, none of it being more than a few feet above the level of the lake, while at Joliet the general surface is quite a number of feet below the level of the lake; that the object of the system of drainage contemplated by the Sanitary District Act was and is to prevent the drainage and sewage of the City of Chicago and its environs from being carried into Lake Michi-

gan, thereby contaminating the waters of that lake; that the Main Channel of the Sanitary District extends from a point just north of Joliet in a general northeasterly direction to the west fork of the South Branch of the Chicago River at or near Robey street, which Channel is approximately 28 miles long, from 160 to 200 feet wide and approximately 26 feet deep throughout its entire length; that the rock section thereof extends from Willow Springs to Lockport, and has a capacity of 14,000 cubic feet of water per second; that the work of constructing the Main Channel was begun immediately upon the organization of the District, and was completed in 1898, and on January 17 1900 was opened and placed in operation by direction of the Governor, as provided in the Sanitary District Act; that since that time it has been continuously operated;

That in order to provide for the operation of the Main Channel it was necessary to deepen and widen the South Branch of the Chicago River and the West Fork of the South Branch; that said rivers were not then large enough to carry the water to be withdrawn from Lake Michigan through the Main Channel without creating a dangerous current in such rivers; that this work was commenced in 1896, pursuant to permit from the War Department, and prior to the opening of the Main Channel, obstructions in the South Branch of the Chicago River and the West Fork of the South Branch were removed, and the channel was widened and deepened to 17 feet throughout the entire stretch; that in 1900 the Sanitary District made plans for further deepening and widening the South Branch of the Chicago River and the West Fork in order to carry an additional amount of water which has been known and called "The Chicago River Improvement Project," which work has gone on from time to time, and it is now rapidly nearing completion; that the permit granted contemplated the widening of such rivers at all points to 200 feet and deepening the same to 26 feet, which work required an immense amount of excavation in the bottoms of said rivers, as well as from the banks the removal of a great many center pier bridges and the installation in their place of bascule bridges of modern type, and in this project the District has expended approximately $12,250,000.00;

That the completion of the Main Channel, and placing of it in operation, prevented the sewage of the Chicago River from flowing into Lake Michigan, but in order to divert the sewage of the sewers emptying directly into the lake it was necessary to construct intercepting sewers in the City of Chicago, north and south along the shore of Lake Michigan; that these intercepting sewers on the south converge at 39th street and the sewage is there pumped together with a certain amount of lake water through the 39th street conduit into the east arm of the South Fork of the South Branch of the Chicago River; that the intercepting sewers on the north converge at Lawrence avenue pumping station; that they intercept the sewers which emptied directly into Lake Michigan on the North Side of the City; that the sewage coming through the intercepting sewers, converging as aforesaid, is pumped together with a certain amount of water from Lake Michigan through the Lawrence avenue conduit to the North Branch of the Chicago River; that the intercepting sewers above mentioned were completed about the same time in the year 1907 and placed in operation; that by the works then constructed practically all the sewage and drainage arising from the original limits of the

Sanitary District was diverted from the water supply into the Main Channel of the District; that in 1903 the territory of the North Shore Suburbs, including Evanston and that in the Calumet District was annexed and power granted to the Sanitary District to construct all drains, ditches, adjuncts and additions to its Main Channel necessary to properly care for the drainage and sewage of this additional territory; that it was necessary to divert the sewage and drainage arising in the territory annexed, as well as that arising from the original limits, in order to prevent pollution of the water supply of the entire population of the Sanitary District, and to carry out that purpose the North Shore Channel was constructed and placed in operation in the year 1910; that this Channel extends from the North Branch of the Chicago River at Lawrence avenue north to Lake Michigan at Wilmette, Illinois; that a lock has been placed at its intersection with the lake so that boats may pass in and out; that the water for dilution purposes is taken from Lake Michigan at the intersection of the North Shore Channel with the shore of Lake Michigan by means of pumps; that subsequently intercepting sewers were constructed to divert the sewage of the North Shore Suburbs so as to carry away from Lake Michigan all the sewage arising from the North Shore towns; that the Sanitary District caused the North Branch of the Chicago River to be deepened and widened so that it is navigable from Lawrence avenue south, which work was completed in 1907;

That it provided an outlet for the sewage and drainage of the Calumet Region of the Sanitary District; that the District laid out a right of way for and entered upon the construction of the Calumet-Sag Channel, which work is now being prosecuted and this channel will be opened in the near future; that the Calumet-Sag Channel extends from the Little Calumet River at or near Blue Island westerly to a point at or near Sag, Illinois, on the Main Channel of the Sanitary District; that connected with the Calumet-Sag Channel there are also in process of construction intercepting sewers converging at the easterly terminus of such Channel; that these intercepting sewers extend through the Calumet District and when completed and placed in operation in connection with the Calumet-Sag Channel will divert all the sewage arising in the Calumet District from Lake Michigan into the Main Channel of the Sanitary District; that the Calumet-Sag Channel will also when it is completed reverse the flow of the Calumet and Little Calumet Rivers at practically all times during the year; that when the Calumet-Sag Channel with its intercepting sewers, and the intercepting sewers connected with the North Shore Channel, are completed and placed in operation all the sewage and drainage which would cause any pollution of the water supply for the population of the entire Sanitary District will be diverted from Lake Michigan through the Main Channel of the District into the DesPlaines and Illinois Rivers, together with such an amount of water as will properly dilute the sewage, oxidize the same, and render it innocuous and inoffensive; that the works of the District completed and now under process of construction constitute a comprehensive method by which the water supply of the inhabitants within the Sanitary District may properly be kept pure and free from pollution; that the result of these works and their operation is indicated by the change in the death rate from typhoid fever and other diseases as compared with the con-

ditions which existed before and after the opening of the Main Channel; and

WHEREAS, The water of the entire lake front at and near Chicago and vicinity prior to the opening of the Main Channel was used as a receiving station for the sewage systems of Chicago and adjoining municipalities, thereby rendering its waters impure and unfit for use, and creating conditions which were harmful and dangerous to the health and welfare of the people of Chicago and adjoining communities, and the water in the Chicago River and its various branches was allowed to remain in even a worse condition than that of the water in Lake Michigan, which conditions have been changed by and through the work of the Sanitary District so that the entire lake front of Chicago and adjoining cities and villages is an asset of which the people can feel justly proud, since it now furnishes opportunities for recreation, pleasure and comfort, a supply of pure water and air, and makes of the cities and towns along the lake real summer resorts instead of disease germ breeding spots to be shunned as they were in former years; and

WHEREAS, By amendment to the Sanitary District Act the Legislature of Illinois authorized and empowered the Board of Trustees of the Sanitary District to utilize the power made available by the works constructed under the provisions providing that it should be converted into electrical energy and transmitted to the various cities, villages and towns within the District and adjacent to the Main Channel, to be used in the lighting of such cities, villages and towns, or parts thereof, or for the operation of pumping plants and machinery used for municipal purposes, and that it might be disposed of to any other persons or corporations upon such terms and conditions as may be agreed upon by the Sanitary District; provided, however, that it shall be the duty of the Sanitary District to utilize so much of said power as may be required for that purpose to operate the pumping stations, bridges and other machinery of said Sanitary District; and that the Board of Trustees of the Sanitary District under such power and authority has developed and improved the amount and quality of such service from time to time, in connection with which it has expended upwards of $4,500,000.00, and from which it has received a revenue of upwards of $8,725,000.00, realizing therefrom a net profit to the Sanitary District after charging off depreciation and interest on the investment of approximately $2,300,000.00, which is directly in the interests of and for the benefit of the taxpayers of and in The Sanitary District of Chicago; also that the District furnishes illumination for Chicago and the Park systems at a saving to the taxpayers of at least two thirds of former cost; that from time to time through lack of information or otherwise statements have appeared in the public press and elsewhere, which would lead the taxpayers to believe that this project maintained and operated by the Sanitary District by and under the direction of the General Assembly of Illinois has not been in the interests of the taxpayers, but has been run for the purpose of profit to the Sanitary District, without thereby correspondingly reducing the taxes to be levied by the District for the construction and conduct of its various works. In this connection the Supreme Court of Illinois only recently held that

> "the Board of Trustees of the Sanitary District are allowed by statute to exercise ordinary business discretion and judgment, and within that discretion and judgment to determine from time to time whether the profits arising from the sale of power and electrical energy

should be applied toward the payment of bonds of the District and interest thereon, or be used for general corporate purposes of the District;"

and regardless of the purpose to which they may be applied within the judgment and discretion of the Trustees, such profits would tend to reduce the taxes to be paid by the taxpayers of the District; furthermore, if such power and authority had not been granted by the General Assembly to the Board of Trustees, the surplus power above mentioned would have been wasted, and such waste would have proportionately increased the amount of taxation to be met by the taxpayers of the Sanitary District; and

WHEREAS, From the beginning of the organization of The Sanitary District of Chicago, the construction of its various channels and intercepting sewers, the deepening and widening of the Chicago River and its branches, and maintaining and operating of pumping stations have involved intricate engineering problems, which have demanded the best thought of minds trained in such technical work, and have involved also the constant care and attention of the various Boards of Trustees which have been elected by the People from time to time, and the cost of such works has involved large sums of money, aggregating approximately $100,000,000; and

WHEREAS, The population of Chicago and the surrounding territory comprised within the limits of The Sanitary District of Chicago is rapidly increasing from year to year, making it necessary to anticipate the future and make adequate preparation now for the proper treatment and disposal of the sewage of such territory during the coming years, which will probably necessitate the erection and operation of plants for the proper treatment of sewage, so that by supplementing the maximum diversion of water from Lake Michigan through the Chicago and Calumet Rivers, and the Channels of the Sanitary District, to the amount required by statute and permitted by the Federal Government, all sewage within such District may be kept out of Lake Michigan and its water maintained in a condition, as now, fit to be used by the people of Chicago and its environs; and

WHEREAS, The Sanitary District of Chicago, comprising its various channels and works hereinbefore mentioned, constitutes an investment and asset of the taxpayers residing within the territorial limits of said District, concerning which they should each and all be fully informed, and it is the duty of such taxpayers to seek information, and inform themselves concerning this great institution and project, which is theirs and theirs alone; and

WHEREAS, Under our system of government, which includes the election of Trustees of the Sanitary District from time to time, questions of partisan politics enter into the discussions on the platform and in the public press in connection with selecting the personnel of the Board of Trustees of the District, the taxpayers of such District should be made to realize that their investment in this project, the expense of construction of its works and the maintaining of the same, are in no sense matters of politics, and that, regardless, of the personnel of the Board of Trustees or its agents and employees from time to time, it is of vital importance to the taxpayers of the Sanitary District that this great institution formulated, organized, constructed and operated for the purpose of preserving the health of the people of this community, should be maintained and its works and facilities improved upon from time to time as

rapidly as local conditions and scientific improvements will permit, and that mere differences of opinion between members of the Board of Trustees which may be expressed from time to time and which have to do with purely their own personal views, should not be allowed to prejudice the minds of the taxpayers of the District against the Sanitary District itself, which is all important to the people; and

WHEREAS, The Board of Trustees of the Sanitary District desire that all of the information possible with reference to the achievements and projects of the Sanitary District, and the means and methods employed in connection therewith, should be given to the taxpayers of the District; and, in order to do so it is necessary to make a systematic examination of the books and files of the various departments of the District, especially those of the Engineering and Electrical Departments, and to have the same assembled in logical order and described in plain language, which may be readily understood by any taxpayer who shall read and examine the same; and

WHEREAS, It is the desire of the Board of Trustees that such information be assembled and promulgated by the Sanitary District at an early date for the benefit and information of the taxpayers, and for the benefit and information of the members of the Constitutional Convention which shall convene in January, 1920; it is, therefore,

Ordered, That the Committee on Employment be, and the same is hereby, authorized and directed to at once ascertain whether there are any persons in the various departments of the Sanitary District who are qualified to do the work above described, and to give the time therefor without interference with the regular business and work of the District, and report the same to the Board of Trustees, and if no such persons or person are or is available for such work, to secure the services of some person not connected with the Sanitary District who is qualified and equipped to perform the services desired as above stated, and to ascertain the amount of compensation which such person shall desire for such services, and to report thereon to the Board of Trustees at its first meeting in August, 1919.

Respectfully Submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
MATT A. MUELLER,
Committee on Engineering.

Mr. Clark moved that the preamble be adopted and that the order be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—Mr. Sergel—One.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that by an order of the Board passed June 5, 1919 (page 713 of the Proceedings) the Chief Engineer and Attorney were authorized to negotiate with the City of Chicago for a contract relating to the construction of a single leaf bascule bridge across the south branch of the Chicago River at Twelfth street as described in said report.

Your Committee further reports that the Chief Engineer and Attorney

have negotiated with the City of Chicago for such a contract and have agreed with the officials of said City upon the terms of the same which contract is herewith transmitted to the Board.

Your Committee further reports that by the terms of said contract the City of Chicago agrees to construct a single leaf bascule bridge across the south branch of the Chicago River at Twelfth street according to a new layout therefor which is described in detail in the report of your Committee heretofore adopted by the Board on June 5, 1919 with the exception that the cross sectional area of the by-pass to be constructed, under said contract west of the west abutment of said new bridge has been enlarged and that the Sanitary District agrees to pay to the City of Chicago one-half of the actual cost of said bridge (not including the cost of the by-pass, land to be acquired therefor and for river widening and of the approaches, etc.) a total sum of not to exceed $600,000.00. The contract has been approved by the Chief Engineer and Attorney and your Committee having considered the same, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and Clerk be and they are hereby authorized and directed to execute said form of contract in quadruplicate when the same has been executed by the proper officials of the City of Chicago.

Respectfully Submitted,

WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

The following is the form of agreement between the City of Chicago and The Sanitary District of Chicago:

THIS AGREEMENT, Made and entered into this day of , A. D. 1919, by and between the City of Chicago, a municipal corporation, party of the first part, hereinafter for convenience designated the "City," and The Sanitary District of Chicago, a municipal corporation, party of the second part, hereinafter for convenience designated the "District," WITNESSETH: THAT

WHEREAS, The parties hereto on October 4, 1915, entered into a certain agreement, by the terms of which said City agreed to construct a new direct lift bridge across the south branch of the Chicago River at Twelfth Street, Chicago, Illinois, in accordance with general drawings which were attached to said agreement, marked "Exhibit A", and specification prepared by said City, and in accordance with detailed drawings and specifications to be prepared by the Strauss Bascule Bridge Company, said bridge being designed so as to provide a navigable channel through the same having a clear width of two hundred (200) feet, and

WHEREAS, Said City agreed to furnish, free of cost to said District, the entire site of said direct lift bridge and to pay all damages to any real estate that might be due to the removal of the existing center pier swing bridge at Twelfth Street and the construction of said new direct lift bridge at said site, and

WHEREAS, Said District agreed to pay the said City at the times and in the manner provided in said agreement, one-half of the cost of constructing the substructure and superstructure only of said new direct lift bridge, including in said cost one-half of the sum of $35,000.00 to be paid to the Strauss Bascule Bridge Com-

pany for preparing the plans and specifications of the work to be done, but not including any part of any sum or sums paid by said City on account of work done by any person in the employ of said City, and further, not including any cost of constructing connecting viaducts or approaches to said new direct lift bridge, and

WHEREAS, Said City further agreed to maintain and operate said new direct lift bridge without expense to said District after said bridge had been completed and after said specified payments had been made by said District to said City, and

WHEREAS, The City Council of said City, on March 23, 1914, page 1414 of Journal of Council Proceedings of said City passed what is known as the "Union Station Ordinance" which provided for the straightening of the Chicago River from a point north of Taylor Street to Eighteenth Street whereby the channel of said river as relocated and straightened will lie almost entirely west of the present location of said river at Twelfth Street and will render useless any new bridge constructed over said river at its present location and will necessitate the construction of another bridge over the relocated and straightened river channel, and

WHEREAS, Said City now desires to construct across said river at Tweltfh Street, a new bridge of the single leaf bascule type in lieu of the direct lift bridge provided to be constructed under said agreement, which said single leaf bascule bridge will provide a clear channel for navigation purposes one hundred forty (140) feet in width and a bypass with a cross sectional area of fourteen hundred (1400) square feet below Chicago City Datum, available for the flow of water through said bypass, said bascule bridge to be so designed and constructed that the single leaf thereof will be carried by an abutment located in the westerly part of said river and close down upon a pier located at the east dock line and also designed so that if the river is straightened and relocated as above described, said leaf can be shortened and rotated on its abutment so as to face in the opposite direction and become the east leaf of a double leaf bascule bridge across said straightened and relocated channel, or, if said river is not hereafter straightened, said leaf can be shortened and become the west leaf of a double leaf bascule bridge across the present river channel which can be widened to afford one hundred seventy (170) feet clear navigable channel by acquiring and dredging out a strip of land behind or east of the east dock line of said one hundred forty (140) foot channel, and

WHEREAS, The cost of constructing said single leaf bascule bridge providing a clear navigable channel of one hundred forty (140) feet in width will be less than the cost of constructing said direct lift bridge, and the movable leaf and abutment of said single leaf bascule bridge will be largely saved if said river is relocated and straightened and a new double leaf bascule bridge constructed over said relocated and straightened channel as aforesaid or if a double leaf bascule bridge is built across the present river channel as aforesaid,

NOW, THEREFORE, In consideration of the foregoing and the mutual covenants hereinafter contained, it is agreed by and between the parties hereto as follows:

1. Said City shall, as soon as practicable, prepare plans and specifications for the substructure and superstructure of a new single leaf deck bascule bridge over the south branch of the Chicago River at Twelfth Street, in the City of Chicago, Illinois, said new bridge to have a roadway approximately fifty-six (56) feet wide between curbs with two sidewalks each approximately seventeen (17) feet wide in the clear, and so constructed as to provide a navigable channel located between the abutment carrying the movable leaf of said new bridge and the east dock line of said channel, that shall have an unobstructed width of at least one hundred forty (140) feet at all points, measured at right angles to the center line of said channel, and a depth of not less than twenty-six and seven tenths (26.7) feet below Chicago City Datum and an unobstructed cross-sectional area available for the flow of water through the same, of not less than thirty-seven hundred and thirty (3730) square feet below Chicago City Datum, it being understood and agreed that no protections or other obstructions shall be placed or permitted to remain in said one hun-

dred forty (140) foot channel. Said City shall also construct a bypass with free unobstructed approaches thereto for the flow of water beneath the said new bridge west of said abutment, said bypass and the approaches thereto each to have an unobstructed cross sectional area below Chicago City Datum available for the flow of water through the same, of not less than fourteen hundred (1400) square feet and a depth below Chicago City Datum of not less than nineteen (19) feet at the dock along the westerly side of same, the bottom of said bypass and of said approaches to slope therefrom towards the east on a grade of one (1) vertical on four (4) horizontal to a depth of twenty-six and seven tenths (26.7) feet below Chicago City Datum, the remainder of said bypass and of said approaches thereto to have a depth at all points of at least twenty-six and seven tenths (26.7) feet below Chicago City Datum. The location of said new single leaf bascule bridge and of said abutment and navigable channel and of said bypass and approaches thereto shall be substantially as shown on the plan hereto attached, marked "Exhibit A" and made a part hereof.

Said plans and specifications of the substructure and the superstructure of said new single leaf bascule bridge shall be subject to the approval of the Chief Engineer of the said District and no contract shall be awarded for and no work done on the construction of said new single leaf bascule bridge or bypass, until said plans and specifications have been approved by said Chief Engineer.

2. Upon the completion of said plans and specifications for said new bridge and bypass and the approval of the same by the said Chief Engineer of said District, said City shall promptly advertise for bids for the construction of the substructure and superstructure of said new single leaf bascule bridge and bypass, and subject to the approval of the Board of Trustees of said District, said City shall award contracts for the performance of said work, but shall not do so without such approval.

3. Prior to the commencement of any other work at the site of said bridge, said City shall acquire the necessary land on the east side of said river and shall lengthen the east arm of the existing center pier swing bridge at Twelfth Street and remove the east end pier of same and construct a new temporary east end pier so as to provide a navigable channel through the east draw of said swing bridge at least ninety-two (92) feet wide in the clear, measured at right angles to the center line of said channel.

4. When the east arm of said swing bridge has been lengthened and said temporary end pier constructed as hereinbefore described, said City shall promptly construct a new permanent dock on the east side of said river across Twelfth Street along the east line of said one hundred forty (140) foot channel beneath said new single leaf bascule bridge and shall dredge said land and said river channel between said new dock and the center pier of said swing bridge to a clear width of not less than ninety-two (92) feet as hereinbefore provided and to the maximum depth possible without endangering said dock or said swing bridge. Said ninety-two (92) foot channel shall have a cross sectional area for the flow of water through the same, of not less than twenty-five hundred (2500) square feet below Chicago City Datum and said City shall thereafter maintain said ninety-two (92) foot channel between said dock and said center pier, free and unobstructed, until said center pier has been removed as hereinafter set forth.

5. Before constructing a cofferdam around the site of the abutment of said new single leaf bascule bridge, said City hereby agrees to acquire the necessary land for said bypass west of said abutment and the necessary land for the approaches to said bypass north and south of the same and shall construct permanent concrete dock walls along the west side of said bypass and of each of said approaches to said bypass on the lines shown on said "Exhibit A" hereto attached, and shall excavate said bypass and the approaches thereto to an average temporary depth of at least nineteen (19) feet below Chicago City Datum. All of that part of said bypass and of the said approaches thereto lying west of the cofferdam to be constructed around the site of the abutment of said new single leaf bascule bridge shall be maintained free

and unobstructed for the flow of water through the same at all times.

It is further understood and agreed by and between the parties hereto that said cofferdam shall be constructed so as to leave open for the flow of water through the bypass west of the same, during the time while said cofferdam is in place, the maximum width and area of cross section of said bypass that is possible without unduly endangering said cofferdam, and a minimum cross sectional area below the Chicago City Datum at all points of not less than six hundred fifty (650) square feet.

6. Said swing bridge may be used for traffic in Twelfth Street across said Chicago river as long as is possible during the construction of the substructure and superstructure of said new single leaf bascule bridge and bypass, but, when no longer required to be used for traffic, said swing bridge and the center pier of the same shall be promptly and completely removed and said channel dredged by said City to a depth of not less than twenty-six and seven tenths (26.7) feet below Chicago City Datum between said new east dock and said cofferdam around the abutment of said new single leaf bascule bridge so as to provide additional cross sectional area in said channel for the flow of water through the same, and said channel shall not be obstructed thereafter.

7. Said City shall also acquire as soon as practicable, a certain triangular piece of land situated on the west side of said river about five hundred (500) feet south of the south line of Twelfth Street, which is shown in red on said "Exhibit A" hereto attached, and shall construct a standard dock along the west side of said piece of land and shall dredge out all material lying east of said dock, to the standard depth in said Chicago river, for the purpose of straightening said river channel through and south of said single leaf bascule bridge.

8. After the abutment of said new single leaf bascule bridge has been completed then said cofferdam shall be promptly removed by said City and said bypass west of said abutment and the approaches to said bypass shall be promptly dredged to a depth of not less than nineteen (19) feet below Chicago City Datum at the docks on the westerly side of said bypass and of said approaches, the bottom of said bypass and of said approaches to slope therefrom towards the east on a grade of one (1) vertical to four (4) horizontal to a depth of twenty-six and seven tenths (26.7) feet below Chicago City Datum, the remainder of said bypass and of said approaches to have a minimum depth at all points of at least twenty-six and seven-tenths (26.7) feet below Chicago City Datum. The minimum cross sectional area of said bypass available for the flow of water through same shall be not less than fourteen hundred (1400) square feet below Chicago City Datum. Said one hundred forty (140) foot navigable channel shall also be promptly dredged over its entire width to the minimum depth of twenty-six and seven tenths (26.7) feet below Chicago City Datum except such slopes adjoining the east dock of said river as are necessary for the safety of said docks, so as to provide a minimum cross sectional area for the flow of water through said navigable channel of not less than thirty-seven hundred thirty (3730) square feet below Chicago City Datum as hereinbefore specified.

Said navigable channel and said bypass and the approaches thereto north and south of each of same shall thereafter be maintained by said City free and unobstructed over the entire width of each and no protections, piles or other obstructions shall be placed in said navigable channel or in said bypass or in the said approaches thereto except by the express permission and subject to the approval of the Chief Engineer of said District.

In case said bypass shall become obstructed by sedimentation or by old timbers, piles or other obstructions, said City, when and as often as directed by the Chief Engineer of said District shall promptly remove such sediment, timber, piles and other obstructions from said bypass and clean said bypass so as to provide the average depth and cross sectional area hereinbefore specified for same, free of cost to said District. In case said City fails, refuses or neglects to perform the work hereinbefore specified in this paragraph of this agreement after sixty (60) days notice from the Chief Engineer of said District so to do, then said District may have said work performed and said

City hereby agrees to pay the cost of the same to said District on demand.

9. It is hereby understood and agreed by and between the parties hereto that said City shall furnish, free of cost to said District, the entire site for said new single leaf bascule bridge and for all approaches and viaducts connecting with the same and for all appurtenances to said bridge, approaches and viaducts, including all land necessary for said bypass and the approaches thereto north and south of Twelfth Street and all land to be used for widening the said river on the east side of same at Twelfth Street and on the west side of the same approximately five hundred (500) feet south of Twelfth Street. Said City also agrees to assume and pay free of cost to the said District all damages of every kind and character to all real estate adjoining, abutting or in the vicinity of said new single leaf bascule bridge for which said City or said District may be or become liable by reason of the removal of the existing center pier swing bridge or its center pier or end piers or any of its approaches or connecting viaducts or any appurtenances to any of same or by reason of the construction of the substructure or superstructure of said new single leaf bascule bridge or of any approaches or viaducts connecting with or adjacent to said new bridge or any appurtenances to said bridge, approaches or viaducts, or by reason of the construction of said bypass or of the widening of said river and the construction of said docks as hereinbefore described. Said City hereby also agrees to save the Sanitary District harmless from and to assume and pay, free of cost to the said District, all damages to persons or property for which said City or said District may be or become liable, due to the performance of any work herein provided to be done by said City or its contractors, including all damages resulting from injury to persons or property that may occur during or due to the use for traffic of said center pier swing bridge or of said new single leaf bascule bridge, or of any part of either of same or of any viaducts connecting with or approaches to said new bridge and from damages sustained by vessels and other water craft and marine equipment arising from or growing out of any work under this agreement.

10. The said District hereby agrees to pay to said City, at the times and in the manner herinafter provided, one-half of the cost of removing the substructure and superstructure of the existing center pier swing bridge, one-half the cost of constructing the abutment, east end pier and protections of the new single leaf bascule bridge including the necessary cofferdam and excavation in same and the necessary dredging in the present river channel within or adjoining Twelfth Street, and also one-half of the cost of the superstructure of said new bridge including only the movable leaf and the stationary parts of the bridge located over and upon the abutment, the electrical equipment, traffic and barrier gates, river signals, sidewalk and roadway lights and signals, machinery houses, operators houses and guard houses and lighting equipment for same; also one-half the cost of such extra work and incidental expenses, as may in the opinion of the Chief Engineer of said District be necessary to fully complete the work hereinabove described in this section of this agreement. No payments shall be made by the said District for the cost of supervising or making by said City or otherwise of any plans for said bridge or bypass or for any of the approaches or viaducts or appurtenances thereto, or for salaries or wages of employees of said City engaged in the direction or supervision of or in the performance of any law, engineering, inspection, excavation, construction or other work provided in this agreement to be performed by said City or by any contractors, and no payment shall be made by said District for the lengthening of or any additions to or alterations of said swing bridge or for any temporary supports thereof or approaches or appurtenances thereto. Said District shall further make no payment for the removal or alteration of or additions to any viaducts or approaches to the center pier swing bridge or for the construction of new approaches or viaducts or additions to or alterations of old or new approaches or viaducts connecting with or in the vicinity of said new bridge, or for any appurtenances to said bridge or approaches or viaducts. Further, said District shall make no payment to said City for the purchase of any land whatsoever or for

the construction of any docks or for dredging the said land acquired for said by-pass and approaches thereto or for dredging said land for widening the said river on the west side of the same approximately five hundred (500) feet south of Twelfth Street, or for any court costs or legal expenses incurred by said City for or on account of anything herein provided to be acquired, furnished or performed by said City, or for any other work performed by said City under this agreement, except as hereinbefore in this section expressly provided to be paid by said District to said City. Provided further, that no payment shall be made by said District on the work done under any contract awarded by said City unless the awarding of said contract shall have been previously approved by said District as provided in the first section of this agreement.

It is hereby expressly understood and agreed by and between the parties hereto, that the total amount to be paid by the said District to said City shall not exceed the sum of six hundred thousand ($600,000.00) dollars.

It is expressly understood and agreed by said City that notwithstanding any provisions hereof to the contrary said District shall not be required to make any payments whatsoever to said City until after said City shall have acquired all of said land herein provided to be acquired by said City for said bypass and for the said approaches thereto and for widening said river on the east side thereof at Twelfth Street and said triangular piece of land on the west side of said river about five hundred (500) feet south of Twelfth Street, and not until said City shall have dredged all of said parcels of land and shall have constructed said docks fronting on each of said parcels of land, as herein provided.

11. It is hereby further understood and agreed by and between the parties hereto that except as hereinbefore provided in the last paragraph of section ten (10) hereof, all payments made by the said District to the said City for any work herein specified shall be made from time to time as the work progresses. The particular amount of any payment to be made by said District to said City shall be determined in accordance with the terms and conditions of each contract for doing said work which may be awarded by the Commissioner of Public Works of said City with the approval of said District, to any contractor, for or on behalf of said City, and the said District on being furnished by said Commissioner of Public Works of said City with certified copies of certificates or vouchers issued to the Contractor for any such work shall within twenty (20) days after the receipt of such certificate or voucher pay to said City a sum equal to one-half of such amount of money as is certified to or vouchered to said Contractor by said Commissioner of Public Works of said City as being due to said Contractor on account of the performance of said work. It is hereby expressly understood and agreed that said District shall not be or become liable to any contractor or contractors, persons or corporations for or on account of the performance of any work mentioned in this agreement or of any work performed in the removal of the said swing bridge and the construction of the new single leaf bascule bridge at Twelfth Street and the approaches, viaducts and appurtenances thereto except the liability of said District to said City hereinbefore set forth.

12. It is hereby further understood and agreed by and between the parties hereto, that said City shall at its sole cost and expense perpetually maintain, repair, operate, alter, renew or rebuild said single leaf bascule bridge including the entire substructure and superstructure of the same and all approaches and viaducts connecting therewith and all appurtenances to said bridge or approaches or viaducts and said City shall also at its sole cost and expense change said new single leaf bascule bridge or replace same with another new bridge, including the entire substructure and superstructure of said second bridge and all approaches and viaducts connecting therewith and appurtenances thereto, over the existing south branch of the Chicago river at Twelfth Street or over the south branch of the Chicago river as the same may be straightened or relocated at Twelfth Street and shall at its sole cost and expense perpetually maintain, operate, alter, renew and rebuild said second new bascule bridge.

13. It is hereby further understood and agreed by and between the par-

ties hereto, that said agreement dated October 4, 1915, between the parties hereto which is printed in the Proceedings of the Board of Trustees of said District on pages 1763 to 1765 inclusive, which provides for the construction of a direct lift bridge across the south branch of the Chicago river at Twelfth Street, shall become null and void upon the complete execution of this agreement by both parties hereto.

IN WITNESS WHEREOF, The City of Chicago, party of the first part has caused this Instrument to be signed by its Commissioner of Public Works, countersigned by its Comptroller, approved by its Mayor and attested by its City Clerk, and The Sanitary District of Chicago, party of the second part, has caused same to be signed by the Chairman of the Committee on Finance of its Board of Trustees and attested by its Clerk, the day and year first above written.

CITY OF CHICAGO.

By .....,

Commissioner of Public Works.

Attest:

..... (Seal)

City Clerk.

Countersigned by:

.....,

City Comptroller.

Approved:

.....,

Mayor.

.....,

Engineer of Bridges.

.....,

City Engineer.

Approved as to form:

.....,

Corporation Counsel.

THE SANITARY DISTRICT OF CHICAGO.

By.....,

Chairman of Its Committee on Finance.

Attest:

..... (Seal)

Clerk, The Sanitary District of Chicago.

Approved as to Engineering:

.....,

Chief Engineer.

.....,

Chief Bridge Engineer.

Approved as to Form:

.....,

Assistant Attorney.

.....,

Attorney.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on June 9, 1919, it considered a communication from the Chief Engineer with reference to the sale of the two old deck plate girder spans carrying the tracks of the Chicago, Rock Island & Pacific Railway Co. over Stony Creek and at that time it was thought advisable to obtain informal bids from junk dealers for the purchase of said spans.

Your Committee is advised by the Chief Engineer that he concluded that a better price could be obtained for said spans by advertising for bids therefor and accordingly, on June 23, 1919, the Clerk of the District inserted advertisements for the sale of said spans in accordance with specifications prepared by the Chief Engineer.

Your Committee having considered the matter, is of the opinion that the action of the Clerk in this respect should be ratified and confirmed and, therefore, recommends the passage of the following order:

Ordered, That the action of the Clerk in advertising for the bids for the sale of the two old deck girder spans above specified, be ratified and confirmed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on April 2, 1919 (page 603 of the Proceedings) the Sanitary District accepted an ordinance of the City of Chicago granting to the Sanitary District, for a period of fifteen years, the right to maintain and operate, as constructed, a masonry duct or water tunnel five feet in diameter and a return pipe or conduit three feet in diameter in East Thirty-ninth street between South State street and the first north-and-south public alley east of State street connecting the power house and station of the South Side Elevated Railroad Company with the Thirty-ninth street conduit on certain terms and conditions set forth in said ordinance.

Your Committee herewith transmits to the Board a form of agreement between the Sanitary District and said Company, by the terms of which the Sanitary District gives and grants to said Company the right to take through said connection from said Thirty-ninth street conduit, such amount of water as said Company may require for use for cooling and condensing purposes in its power house and station, said water to be returned after such use, to said Thirty-ninth street conduit.

Said Company, on its part, agrees to pay to the Sanitary District for the use of said water for every calendar month or part of a calendar month in which water is actually taken, one twelfth of a sum equal to $1.00 for each rated boiler horse power of the boilers in said power house. The present rated boiler horse power of said Company in said power house is 9800 and it is agreed that according as said rated horse power is increased or decreased, the compensation for the use of said water shall be increased or diminished, provided the minimum payments to be made in each and every calendar year of the term of said agreement shall be not less in the aggregate than $3,000.00.

Said Company also agrees to pay to the City of Chicago the annual sum of $50.00 provided in section 4 of said ordinance of April 2, 1919 and also the sum of $150.00 being the premium on the bond furnished by said Sanitary District under the terms of section 6 of said ordinance.

If said Company shall at any time determine to permanently discontinue the taking of water from said conduit, it may upon giving ninety days notice in writing to the Sanitary District of its desire so to do, cancel said agreement, but agrees to carry out its obligations specified in section one and five of said agreement.

The Company also agrees to fully carry out and perform all the terms, conditions and provisions of sections one to five inclusive of said ordinance of April 2, 1919.

Your committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute

said agreement in quadruplicate when the same has been properly executed by the officials of the South Side Elevated Railway Company.

Respectfully Submitted,

WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

The following is the form of agreement with the South Side Elevated Railroad Company:

AGREEMENT, Made this day of , A. D. 1919, by and between The Sanitary District of Chicago, a corporation organized under the laws of the State of Illinois, party of the first part, hereinafter called the "Sanitary District," and the South Side Elevated Railroad Company, an Illinois corporation, party of the second part, hereinafter called the "Elevated Company," WITNESSETH:

WHEREAS, On the 6th day of May, 1904, an agreement was entered into between the parties hereto wherein and whereby the Elevated Company, acting for and on behalf of the Sanitary District, and under authority of an ordinance of the City of Chicago to the Sanitary District, passed January 25, 1904, and amended March 29, 1904, constructed and has since maintained an underground masonry duct or water tunnel five (5) feet in diameter connecting the powerhouse and station of the Elevated Company located at State street, between Thirty-ninth and Fortieth streets, with the twenty-foot conduit of the Sanitary District in Thirty-ninth street, also a return pipe from said station to said conduit, for the purpose of conveying from and returning to said twenty-foot conduit water to be used exclusively for cooling and condensing purposes by the Elevated Company; and

WHEREAS, The Elevated Company has been using for said purposes water conveyed by said means under the provisions of said agreement; and

WHEREAS, The said agreement and the said ordinance of January 25, 1904, as amended, both expired by limitation on January 25, 1919; and

WHEREAS, The City of Chicago on the 2nd day of April, 1919, passed another ordinance, a true copy of which is hereto attached and made a part of this agreement, granting to the Sanitary District the right to maintain the said duct or water tunnel and return pipe or conduit for a further period of fifteen (15) years from the 25th day of January, 1919, upon the terms and conditions in said ordinance set forth; and

WHEREAS, The Sanitary District has accepted said ordinance of April 2, 1919, as required by Section 7 thereof, and has filed its bond to the City of Chicago, in the penal sum of ten thousand dollars ($10,000), conditioned as in Section 6 in said ordinance provided, and the parties hereto desire to contract for the continued use of said masonry duct and return pipe, authorized by said ordinance of April 2, 1919, and now being maintained as in said agreement of May 6th, 1904, provided:

NOW, THEREFORE, In consideration of the premises and of the mutual undertakings hereof, it is hereby covenanted and agreed between the parties hereto as follows:

1. The Elevated Company agrees, at its own expense, to maintain said masonry duct and return pipe in good order and condition, and shall at all times keep the surface of the street over the said duct and conduit in a condition satisfactory to the Commissioner of Public Works of the City of Chicago, and safe for public travel, and will save and hold harmless the Sanitary District therefrom, and from all cost, damage or expense arising or to arise out of anything done or omit-

ted in and about the maintenance and use of said duct and return pipe.

The Elevated Company agrees that at the expiration of the privileges granted by said ordinance of April 2, 1919, unless the same shall be renewed, it will, at its own expense and without cost or expense of any kind whatsoever to the Sanitary District or to the City of Chicago remove said duct and return pipe, fill up the space where the same is located and restore the pavement over said space to a condition similar to the balance of the street in the same block, to the satisfaction of the Commissioner of Public Works of the City of Chicago as provided in section three (3) of said ordinance of April 3, 1919. In the event the Elevated Company shall refuse or neglect to perform the work specified in this section 1 of this agreement when ordered so to do by the Commissioner of Public Works of the City of Chicago said work may be done by the Sanitary District and the Elevated Company agrees to repay to the Sanitary District the cost of said work with interest thereon at the rate of 7% per annum from the date said cost is paid until paid by said Elevated Company to said Sanitary District. The Elevated Company shall and it hereby agrees that it will at its own cost and expense upon such termination promptly pay all cost and expense of cutting off the connections with said duct and return pipe to the said twenty-foot conduit, and close the openings, all in a workmanlike manner.

2. The Sanitary District hereby gives and grants unto the Elevated Company, its successors and assigns, the right and privilege of taking through said connections from the said twenty-foot conduit of the Sanitary District in Thirty-ninth street, between Wabash avenue and State street, in the City of Chicago, Illinois, such amounts of water as the Elevated Company may require for use for cooling and condensing purposes (and for no other purpose whatsoever) in the power-house and station of the Elevated Company, located between Wabash avenue and State street and between Thirty-ninth and Fortieth streets, in the City of Chicago.

3. All the water to be taken from said twenty-foot conduit by the Elevated Company for said cooling and condensing purposes shall be by it returned to said conduit after use by it for such cooling purposes, and none of the water so taken from said twenty-foot conduit shall ever be used under boilers, or for any other uses or purposes than that of cooling and condensing at said power-house; and in that behalf the Elevated Company expressly agrees that the amount of water required by it from the water works of the City of Chicago will not be decreased or reduced by reason of its connection with said twenty-foot conduit and the use of water taken by it from said conduit under the terms hereof.

4. The Elevated Company shall and it hereby expressly covenants and agrees that it will, while this agreement remains in force, pay to the Sanitary District for the use of said water under this agreement, for every calendar month or part of a calendar month in which water for said purposes shall actually be taken from said conduit, one-twelfth (1/12th) of a sum which shall equal one dollar ($1.00) for each rated boiler horsepower of the boilers in said power-house. The present rated boiler horse-power of the Elevated Company in its said power-house is 9800, and it is agreed that according as the said rated boiler horse-power of the Elevated Company in its said power-house is increased or decreased, the rental or compensation for the use of said water taken from the said twenty-foot conduit shall be ratably increased or diminished, provided the minimum payments to be made in each and every calendar year of the term of this agreement shall be not less in the aggregate than the sum of three thousand dollars ($3,000). When payment is due under the terms hereof for any calendar month, or part thereof, such payment shall be made by the Elevated Company to the Sanitary District on or before the thirtieth (30th) day of the next succeeding calendar month.

5. The Elevated Company shall and it hereby covenants and agrees that it will promptly and seasonably pay to the City of Chicago and save the Sanitary District harmless from the annual sum of fifty dollars ($50), as in Section 4 of the said ordinance of April 2, 1919, provided. In case

the Elevated Company fails or refuses to pay the compensation of fifty ($50) dollars per annum in the manner specified in section 4 of said ordinance of April 2, 1919, then said Sanitary District may pay said compensation and said Elevated Company agrees to repay the said Sanitary District the amount so paid with interest thereon at 7% per annum from the date of such payment until paid by the said Elevated Company.

The Elevated Company also agrees to pay said Sanitary District the sum of one hundred fifty ($150) dollars, being the premium on the bond to be furnished by the Sanitary District under the terms of Section 6 of said ordinance of the City of Chicago of April 2, 1919.

6. This agreement shall continue and be in force for the period of fifteen (15) years from and after January 25, 1919, but shall be subject to revocation or cancellation by either party hereto, if and when said ordinance of April 2, 1919, shall be revoked or repealed, or shall be amended or modified in such manner as to prevent the Elevated Company from receiving the necessary water, as in Section 2 of said ordinance provided, without the consent of the Sanitary District.

If the Elevated Company shall at any time determine to permanently discontinue the taking of water from said Sanitary District conduit, it may, upon giving ninety days' notice, in writing, to the Sanitary District of its desire so to do, cancel this agreement, provided the Elevated Company shall not then be in default in any of its agreements herein contained by it to be made, kept and performed; and provided, further, that, notwithstanding such cancellation, the obligations of the Elevated Company under paragraphs 1 and 5 of this agreement shall continue until fully satisfied according to the terms of said agreement.

It is further expressly covenanted and agreed between the parties hereto that if the Elevated Company shall, at any time, be in default for the period of ninety (90) days, in any of its payments in this agreement specified to be paid by the Elevated Company, then upon and after sixty days' written notice from the Sanitary District to the Elevated Company of its intention so to do, the Sanitary District may declare this agreement terminated and ended, and may at the end of sixty days' notice, if the default continues during that time, cut off and deprive the Elevated Company of all connection with, and use of water from said conduit in said Thirty-ninth street.

7. This agreement is made subject to all the terms, conditions and provisions of Sections 1, 2, 3, 4 and 5 of said ordinance of April 2, 1919, and the Elevated Company covenants and agrees to be bound by and to carry out all of said provisions, terms and conditions, and to save harmless the Sanitary District therefrom, and from all costs, damage or expense arising or to arise out of the failure, omission or neglect of said Elevated Company to comply with all the terms and conditions of said ordinance of April 2, 1919.

8. The Sanitary District shall be allowed reasonable opportunity to examine the boilers in the said powerhouse, once in each six months in order to determine the rated boiler horse-power of said plant.

9. It is understood and agreed that the Sanitary District shall not be or be taken to be under any obligation, by reason of anything in this agreement contained, to furnish at all times in said conduit in Thirty-ninth street a sufficient quantity of water to enable the Elevated Company to draw therefrom the water required for its condensing purposes, and that the Elevated Company shall have no right or claim for damages against the Sanitary District by reason of the inability of the Elevated Company to procure from said conduit a quantity of water sufficient for its condensing purposes, as above mentioned.

In Witness Whereof, The said Sanitary District has caused this instrument to be executed by the Chairman of its Committee on Finance and attested by its Clerk, with its corporate seal thereto attached, the day and year first above written, authority having been previously given the Chairman of its Committee on Finance and Clerk, respectively, by its Board of Trustees; and the Elevated Company has caused this agreement to be executed by its President and Secretary, respectively, with its corporate seal hereto attached, authority having been previously given to its

President and Secretary, by its Board of Directors.

THE SANITARY DISTRICT OF CHICAGO.
By.....,
Chairman of Its Committee on Finance.
Attest:
.....,
Clerk.
(Seal)
SOUTH SIDE ELEVATED RAILROAD COMPANY.
By.....,
President.
Attest:
.....,
Secretary.
(Seal)
Approved as to Form:
CHAS. E. ANTHONY,
Asst. Attorney.
C. ARCH WILLIAMS,
Attorney.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that he has practically completed the plans and specifications for the following work:

A. The wrecking of that part of the "Union Loop Power House" situated on real estate acquired from the Northwestern Elevated Railroad Company situated on the east side of the Chicago River just south of Van Buren street.

B. The widening of the Chicago River to a uniform width of 200 feet by excavating said real estate.

C. The widening of the Chicago River to a similar width by excavating the real estate adjoining said "Union Loop Power House" which was acquired from the Commonwealth Edison Company.

D. The widening of the Chicago River to a similar width by excavating the real estate situated on the east side of the Chicago River near 16th street, authorized to be acquired from the Chicago, Rock Island & Pacific Railway Company and the New York Central Railroad Company,

and he requests that authority be given the Clerk to advertise for bids for doing said work in accordance with the completed plans and specifications therefor.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to advertise for bids for doing said work, provided, however, that no contract shall be entered into between the Sanitary District and the successful bidder for said work until said real estate has been acquired from the Railroad Companies mentioned and until said plans and specifications have been approved by the Board.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, June 26, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the following contracts for residence lighting have been executed by him:

White Paving Company, Fullerton avenue and Chester street,
in Chicago.

Mrs. A. Kuiken, 216 Western avenue,
Mrs. W. F. Mancke, 291 Vernon avenue,
John Malm, 305 Collins street,
Fred Labalm, 8 York street,
Mrs. C. Buckinham, 496 High street,
all in Blue Island, Illinois.

A. Paul Paulte, 6607 31st street,
Esper R. Oven, 6611 31st street,
Mrs. O. A. Graham, 3216 Harold avenue,
J. C. O'Donnell, 3240 Baldwin avenue,
C. Lavahn, 7114 34th street,
J. Vejr, 2841 Ridgeland avenue,
all in Berwyn, Illinois.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the action of the Electrical Engineer in executing the contracts for residence lighting with the parties above mentioned be, and the same is hereby ratified and confirmed.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WM. J. HEALY,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Mr. Thos. H. McIntyre, 612 Sheridan Road, Wilmette, requesting permission to build, at his own expense, a stairway from the top of the hill to the pier, on the south side of the bluff at Wilmette, for the use of the general public.

Referred to the Committee on Engineering.

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, JULY 3, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the chair and, the roll being called, there were

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Absent—Mr. Paullin—One.

BIDS.

The Clerk opened and read the bids received for the sale by the Sanitary District of two steel deck plate girder railroad bridges from the old C., R. I. & P. Ry. bridge over Stony Creek, in Blue Island, Illinois, as shown in the schedule printed on page 850 of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabu-

THE SANITARY DISTRICT OF CHICAGO.

Proposals for Purchase of Two Old Steel Railroad Bridges at Blue Island, Ill.

Bids opened July 3, 1919.

In Order of Magnitude.	Name and Address of Bidder.	Amount of Deposit.	ITEM A. Purchase and Removal of Bridge stored east of C. R. I. & P. Railway Tracks. Estimated Weight 63 Tons.		ITEM B. Purchase of Bridge over Stony Creek under Main Track of C. R. I. & P. Railway. Estimated Weight 63 Tons.		Grand Total.
			Price Per Net Ton.	Total.	Price Per Net Ton.	Total.	
1	Getz, Mitchell & Co. ..... Chicago, Ill.	$100.00	$9.48	$597.24	$10.15	$639.45	$1,236.69
2	A. Levine & Co. ..... Chicago, Ill.	100.00	9.75	614.25	9.75	614.25	1,228.50
3	Herman Miller ..... Chicago, Ill.	100.00	9.575	603.23	9.575	603.23	1,206.46
4	Eastern Metal Refining Co. ..... Chicago, Ill.	100.00	8.25	519.75	8.60	541.80	1,061.55
5	Nathan Iron & Machinery Co. ..... Chicago, Ill.	100.00	7.20	453.60	9.26	583.38	1,036.98
6	James S. Miller Co. ..... Chicago, Ill.	100.00	7.60	478.80	8.50	535.50	1,014.30
7	L. Morris & Co. ..... Chicago, Ill.	100.00			14.00	882.00	Bid Informal

Item	DES
1	Earth excavation
2	Rock excavation
3	Rolled embankm
4	Loam .....
5	Sand fill .....
6	Roadways and
7	Seeding and pla
8	Sprinkling filter
9	Secondary settli
10	Sludge bed and
11	Filter and pump
12	Pumping machin
13	Building and re
14	Wire fencing ..
15	Replacing wire
16	Removal of brid
17	Slope paving ...
18	Cover for Imhof
19	Ten inch tile p
20	Reinforcing stee
21	Additional concr
22	Additional concr
23	Timbering left i
24	Labor for adjus
	Tota
	Tota

THE SANITARY DISTRICT OF CHICAGO.

TABULATION OF BIDS FOR CONSTRUCTION OF MORTON GROVE SPRINKLING FILTER PLANT.

Received July 3, 1919.

Item	DESCRIPTION OF ITEM	Estimated Quantities	1 Ready & Callaghan		2 Peterson & Screen		3 Hoeffer & Company		4 Schillinger Const. Company	
1	Earth excavation	2,500 cubic yards	$ 1.65	$ 4,125.00	$ 1.75	$ 4,375.00	$ 1.90	$ 4,750.00	$ 1.65	$ 4,125.00
2	Rock excavation	5 cubic yards	3.00	15.00	3.00	15.00	3.00	15.00	3.00	15.00
3	Rolled embankment	50 cubic yards	.75	37.50	1.50	75.00	2.00	100.00	2.00	100.00
4	Loam	750 cubic yards	2.50	1,875.00	3.00	2,250.00	2.75	2,062.50	2.75	2,062.50
5	Sand fill	125 cubic yards	3.00	375.00	3.00	375.00	3.00	375.00	3.00	375.00
6	Roadways and walks	50 cubic yards	4.00	200.00	5.50	275.00	4.00	200.00	1.75	87.50
7	Seeding and planting	Lump Sum	....	.....	....	.....	....	.....	....	300.00
8	Sprinkling filter and pump well	Lump Sum	....	13,614.00	....	15,470.00	....	15,964.00	....	13,813.00
9	Secondary settling tanks	Lump Sum	....	2,339.00	....	2,376.00	....	2,826.00	....	3,339.00
10	Sludge bed and sludge piping	Lump Sum	....	1,500.00	....	1,522.00	....	1,737.00	....	1,674.00
11	Filter and pump well house	Lump Sum	....	6,263.00	....	7,200.00	....	6,822.00	....	5,289.00
12	Pumping machinery	Lump Sum	....	2,200.00	...	2,850.00	....	2,600.00	....	2,400.00
13	Building and remodelling miscellaneous manholes	Lump Sum	....	1,610.00	....	1,800.00	....	2,634.00	....	1,946.00
14	Wire fencing	100 lineal feet	1.50	150.00	1.00	100.00	2.00	200.00	1.75	175.00
15	Replacing wire fencing	100 lineal feet	.50	50.00	.60	60.00	1.50	150.00	1.00	100.00
16	Removal of bridge	Lump Sum	....	100.00	....	100.00	..	100.00	....	406.00
17	Slope paving	200 square feet	.40	80.00	.20	40.00	.30	60.00	.15	30.00
18	Cover for Imhoff tanks	Lump Sum	....	280.00	....	310.00	....	350.00	....	329.00
19	Ten inch tile pipe	175 lineal feet	1.75	306.25	1.80	315.00	2.00	350.00	1.50	262.50
20	Reinforcing steel	41,000 pounds	.05	2,050.00	.07¾	3,177.50	.06	2,460.00	.05	2,050.00
21	Additional concrete, Class A	5 cubic yards	10.00	50.00	10.00	50.00	10.00	50.00	10.00	50.00
22	Additional concrete, Class B	5 cubic yards	9.00	45.00	9.00	45.00	9.00	45.00	9.00	45.00
23	Timbering left in place	5 M. ft. B. M.	30.00	150.00	30.00	150.00	30.00	150.00	30.00	150.00
24	Labor for adjusting sewage distribution system	100 man-hours	1.25	125.00	1.50	150.00	1.50	150.00	1.25	125.00
	Total Exclusive of Item 7		....	$37,539.75	....	$43,080.50	....	$44,150.50	....	$38,948.50
	Total Inclusive of Item 7		....	.....	....	.....	....	.....	....	$39,248.50

lation and to the Committee on Engineering for report.

The motion prevailed.

The Clerk opened and read the bids received for the construction of the Morton Grove Sprinkling Filter Plant, as shown in the schedule printed on page 851A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Chief Engineer for report.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the regular meeting of June 19, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Chief Engineer for the month of January, 1919, which was ordered published and filed, as follows:

CHICAGO, February 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of January, 1919, giving the detailed operation of the same.

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed no material from the spoil bank during the month.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, Contractor, continued operations throughout the month. All work was carried on in one 10-hour shift per day, except pumping channel which was carried on in two 12-hour shifts at station 28+00 from the 1st to the 31st. Drag line was engaged in backfilling on the south side of the turning basin, between stations 3+00 and 5+00, from the 7th to the 15th. Hoisting concrete for the south wall of the turning basin, between stations 1+00 and 1+50 on the 16th and 17th; excavating glacial drift in turning basin between stations 4+00 and 4+50, on the 10th and 11th, and between stations 6+00 and 6+80 from the 21st to the 25th. Excavating rock, turning basin, between stations 6+60 and 6+80, from the 28th to the 30th. Locomotive crane No. 1 was engaged in cleaning up turning basin on the 2nd and 3rd, hoisting concrete for south wall of turning basin at station 3+00 on the 15th and 16th. Concrete mixer was engaged in mixing concrete for south wall, turning basin, between stations 6+60 and 6+80 on the 10th and 11th and at station 6+80 on the 30th and 31st. Woodford cars and flat cars and buckets were employed in hauling concrete from the mixer to the wall on the 10th, 11th and 30th and 31st. Blasting rock was carried on at station 6+80 in the turning basin on the 27th and 28th. Force account work was carried on as follows: Cleaning ditch on the 17th; cleaning top of wall on the 20th; cleaning drain ditches on the 29th and 30th. An average daily force of 36.7 men was employed. At the end of the month 97.4 per cent of the total estimated value of the contract was completed.

Section No. 13.

A. Guthrie & Co., Contractors, closed down their plant for the winter on December 21, 1918. The following work was carried on during the month:

Pumping Channel at station 782+00 on the 17th and 18th, working one 4-hour shift per day, and at station 749+00 from the 8th to the 31st, working one 7-hour shift per day. An average daily force of 2 men was employed. At the end of the month 58.4 per cent of the total estimated value of the contract was completed.

The Chicago Telephone Co. employed an average daily force of 6.5 men placing poles and stringing wires along the north berm between stations 792+00 and 794+00 on the 3rd and from the 6th to the 11th, working one 8-hour shift per day.

The Public Service Company of Illinois employed an average daily force of 3 men in lowering a 3 inch gas main under the Division street bridge to prevent freezing on the 3rd, and 4th, working one 6-hour shift per day and on the 13th working one 9.5-hour shift.

The C. R. I. & P. Ry. Co. employed a force of 4 men in raising and ballasting their north approach to new west bound track on the 20th.

The B. & O. Railway Company employed a force of 8 men, working one 8-hour shift on the 2nd laying sidewalk on trestle over Stony Creek, and a force of 18 men working one 8-hour shift per day from the 9th to 21st. tearing out old trestle over Stony Creek.

Section 14.

A. Guthrie & Co. Contractors, closed down their plant for the winter on December 21, 1918. They were engaged in pumping channel at station 846+00 from the 21st to the 31st working one 4-hour shift, per day and at station 837+00 from the 1st. to the 31st, working one 6-hour shift per day. An average daily force of 3.5 men was employed. At the end of the month 99.8 per cent of the total estimated value of the contract was completed.

BRIDGES.

B. & O. Railway Bridges.

The B. & O. Railway Co. employed a force of 2 men drilling holes in tie plates from the 2nd to 31st.

CONTROLLING WORKS.

The Sanitary District Organization employed a force of 3 men finishing off machinery house at the S. E. sector gate on the 2nd and 3rd, working one 8-hour shift per day.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 6.

Byrne Brothers Dredging & Engineering Co. carried on a small amount of work throughout the month consisting of general work on maintenance and repairs of plant, etc. An average daily force of 4.5 men was employed.

EVANSTON INTERCEPTING SEWER.

Contract Section No. 1.

Nash-Dowdle Co. Contractors, continued operations throughout the month. Cleaning of the tunnel sections on Elmwood Ave. and Custer Ave. was resumed on the 7th and continued throughout the month. The work of constructing manholes and making sewer connections at various locations was carried on throughout the month. Construction of the 18-inch tile sewer in Davis was begun on the 1st and completed on the 11th. Construction of the 18-inch tile sewer in Chicago avenue near Dempster street was continued and completed on the 11th. Construction of the 18-inch tile sewer in Chicago avenue between Washington and Main streets was completed on the 9th. An average daily force of 47 men was employed. At the end of the month 99 per cent of the work was completed.

TEMPORARY PUMPING PLANT.

Nash-Dowdle Co., Contractors, continued the work of the installation of pumps until the 30th, on which date the pumps were put in operation. An average daily force of 4 men was employed.

DES PLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, Contractors, continued operations throughout the month. The work consisting of excavation of the main line sewer in First avenue, north of 12th street. An average daily force of 64 men was employed. At the end of the month 6.5 per cent of the work was completed.

PUMPING STATIONS.

Calumet Pumping Station.

T. J. Forschner Contracting Company, Contractors, continued operations throughout the month. The work consisting of building column forms and general work on maintenance and repairs to plant. An average daily force of 19 men was employed.

STOCK YARDS TESTING STATION.

The Sanitary District Organization employed a force of 6 men throughout the month in dismantling this station preparatory to moving same to the North Branch of the Chicago River, where it is to be used for testing tannery wastes.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

BRIDGES.

Summit Road Bridge.

The work of reflooring this bridge was continued during the month and completed on the 29th. The railings on the bridge and fences on the approaches were repaired.

The Romeo Road, Lemont Road and Willow Springs Road bridges were inspected.

Minor repairs were made to the floor of the Lemont Road Bridge.

Repairs were made to the west walk of the Western avenue bridge and new stringers were put in and painted with creosote oil.

A small amount of repairs were done to the sidewalks of the Kedzie avenue bridge.

CONTROLLING WORKS.

The bear trap dam was shut down the entire month. The sluice gates were closed the entire month.

MAIN CHANNEL EXTENSION.

BRIDGES.

9th and 16th Street Bridges.

The circuit breaker on the 16th street bridge was repaired on the 22nd. Two men were on duty on these bridges, working from 7 A. M. to 3 P. M. and from 3 P. M. to 11 P. M.

BUTTERFLY DAM.

This dam was operated on the 12th, 19th and 26th.

DAMS AT THE POWER HOUSE.

The forty-eight foot dam was open some part of two days or a total of one hour and fifty minutes, an average of four minutes for each day of the month. The twelve foot dam some part of two days or a total of seven hours and forty minutes, an average of fifteen minutes for each day of the month.

Heater was installed on the 2nd; Bell was repaired on the 3rd; Heater was repaired on the 16th. The tubes, chains and gauges at the dam house were greased on the 19th.

Samples of canal water were taken every eight hours for the Sanitary Dept.

Three men were on duty working in shifts of 8-hours each.

I. & M. CANAL LOCK AT THE POWER HOUSE.

No boats passed through the lock during the month. The heater was repaired on the 4th, 6th & 7th.

NORTH SHORE CHANNEL.

Bridges.

The Sanitary District Organization made minor repairs to the floor of the Foster avenue bridge; the roadway floor of the Peterson avenue bridge was cleaned.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated, pumping sewage, throughout the month. Repairs were completed on sewage pump No. 3. The track scale was put in working order. The wiring of the traveling crane was overhauled. In the boiler room, the main steam header was overhauled; the boiler feed pumps were repaired; the house pump was overhauled and the brick work of boiler Nos. 2, 3, 4, and 7 was repaired. The pumps were

operated as follows: Sewer pump No. 1 was operated some part of seventeen days or a total of two hundred and seventy-three hours and forty minutes. Pump No. 2 some part of twenty days or a total of three hundred and ninety-one hours and forty-five minutes. Pump No. 4 some part of four days or a total of eighty-one hours and fifty-five minutes. The three pumps were operated for a grand average of eight hours and nineteen minutes for each day of the month, and pumped an average of seven thousand four hundred and seventy-eight cubic feet of sewage for each minute of the month. Sewer pump No. 3 was shut down the entire month.

Fresh water pumps Nos. 5 and 6 were each operated some part of five days or a total of sixty two hours, an average of two hours for each day of the month, and pumped an average of five thousand six hundred and four cubic feet of water for each minute of the month.

Lawrence Avenue Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 2 was operated some part of seventeen days or a total of three hundred and thirty-three hours and fifteen minutes. Pump No. 3 some part of twenty days or a total of four hundred and twelve hours and five minutes. The two pumps were operated for a grand average of twelve hours and one minutes for each day of the month, and pumped an average of three thousand one hundred and twenty-one cubic feet of sewage for each minute of the month. Sewer pump No. 1 and fresh water pump were shut down the entire month.

A complete overhauling of the station was begun. The boiler feed pumps were overhauled; the water purifier (for feed water) was cleaned; the house pump was overhauled and repaired; the stoker of boiler No. 2 was repaired and the grate shortened two links; the wiring on the switchboard was overhauled; the steam line to the electric lighting engines was overhauled and a new valve put in the line; new fusible plugs and low water alarms were put on both boilers; a new arch was put under boiler No. 2.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The pumps were operated as follows:

Pump No. 1 was operated some part of thirty-one days or a total of five hundred and forty-three hours and nineteen minutes. Pump No. 2 some part of two days or a total of fifteen hours and twenty-five minutes. Pump No. 3 some part of twenty-five days or a total of four hundred and six hours and twenty-two minutes. Pump No. 4 some part of twenty-five days or a total of three hundred and eighty-eight hours and fifteen minutes. All of the four pumps were operated for a grand average of ten hours and fifty-four minutes for each day of the month, and pumped an average of fifteen thousand two hundred and eighty-two cubic feet of water for each minute of the month.

The water glands on the pump shafts were cleaned and repacked.

MISCELLANEOUS EQUIPMENT.

A force of three men was engaged on removing the cement gun plant from scow No. 2 at 31st street and Western avenue working throughout the month, preparatory to repairing the scow.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Mor-

ris, Ottawa, Peru, and Chillicothe. Special analyses were made on samples shipped in from Lockport.

Sewer and Rain Gauges.

Rain Gauges were operated at the 39th Street Pumping Station, Stockyards Testing Station, Lockport, Kensington, and at 31st street and Western avenue. The records collected were worked up in the office as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport, weekly samples from Lockport and the Illinois River at Morris, Ottawa, Peru, and Chillicothe.

ENGINEERING.

Drafting Division.

The following work was carried on during the month: Reducing the Stockyards Map. Tracing contract drawings of the Des Plaines Pumping Station. Revising index system. Preparing an Ordinance map for part of Section No. 1 of the Calumet Sewer crossing the Calumet River. Writing monthly reports of the engineering department and reading proof on same. Compiling the Chicago River Atlas was continued. Compiling Calumet-Sag Atlas was continued. Preparing plat proposed easements for section 1 of the Calumet Sewer. Printing index cards. Copying records at the City Map Dept. for the North Branch Survey. Work on the 1919 Budget. Plat for application for permit for water tunnel at South Side Elevated plant at 39th street and State street was prepared and field measurements were taken. Checking right of way lists for Cook County Tax exemption for Real Estate Department. Revising statistics tabulation of Sanitary District. Computing co-ordinates of North Branch Survey. Tinting maps of revised Stock Yards plan. Coloring and posting Main Channel Lease maps for Real Estate Dept. Coloring ordinance maps of Calumet Sedimentation Plant. Preparing Ordinance map for Calumet Pumping Station overflow sewer. Filing warehouse index cards. Preparing ordinance map for the Strand line on Section 1 of the Calumet Sewer. Writing reports of the Calumet-Sag Channel construction and filing reports.

Sanitary Division.

The following work was carried on during the month: Preparation of a report on the testing station work at the Stockyards was continued. Preparation of plans and specifications for the Calumet Sewer was continued. Conferences were held with the Officials of the City of Chicago. Preparations of plans and specifications of the Des Plaines sewage treatment works was continued. The preparation of supplementary plans for the Calumet and Evanston sewage pumping station was continued. Studies were made of the proposed rearrangement of the 95th Street Pumping Station. Preparations where begun on the intercepting sewer in South Chicago. Preparation of plans was begun on the storm overflow to the Calumet River at Wildwood. Studies were begun on an auxiliary generator station at the Calumet Pumping Station, to be run by oil engines. Conferences were held with various parties from the Calumet Region in Indiana over proposed schemes for sewage diversion and treatment.

Hydraulic Measurement Division.

The self-registering gauges on the Main Channel at Willow Springs and Lemont and on the Lake Front at the Coast Guard Station were operated and periodically inspected. Records from these gauges were worked up in the office.

Bridge Division.

Work was continued on the details of the reinforced concrete for the Calumet Pumping Station. Designs for sluice gates were investigated. Design-

ing of roof trusses and other steel work for the Des Plaines Sewage Pumping Station was begun. A design was prepared for timber shoring from the underside of the 48th Avenue Bridge to the temporary dam, to be used instead of the anchor rods originally intended, as drilling in the rock for anchor rods was found impracticable on account of water at the site of the dam.

Channel Maintenance Division.

Party was employed on Chicago River dredging and docking. North Shore Channel sloping, office and field work. Survey North Branch, Chicago River, Foster avenue to Lake street. Setting gauges at Willow Springs. Repair to floating gauge at 39th Street Pumping Station and sub-station Main Channel. Towing supplies for wall repairs Main Channel. Setting gauge North Shore Channel. General office work at Canal street.

The Calumet-Sag Channel Field parties perfomed the usual routine construction duties as follows: The Sag Division on Section 1 and the Blue Island Division on Sections 13 and 14.

The general engineering force and other employes continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel section, keeping the accounts of the department, preparing vouchers, furnishing information to other departments and performing other duties, etc.

Respectfully submitted,
G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 3, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN:—Your Committee on Finance reports that it has had under consideration the advisability of advertising for bids to furnish and deliver lubricating oils and gasoline to supply the needs of the Sanitary District for the remainder of the year 1919 and is of the opinion that such supplies should be advertised for.

Your Committee further reports that the Electrical Engineer has prepared specifications for furnishing and delivering said lubricating oils and gasoline, and has presented the same to your Committee for its approval.

Your Committee further reports that it has considered said specifications prepared by the Electrical Engineer, has approved same, and, therefore, recommends the passage of the following order:

Ordered, That the specifications prepared by the Electrical Engineer for furnishing and delivering said lubricating oils and gasoline be, and the same are hereby approved, and it is further

Ordered, That the Clerk be, and he is hereby authorized and directed to advertise for bids for furnishing and delivering said lubricating oils and gasoline in accordance with the specifications so prepared by the Electrical Engineer.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark,

Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 3, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN:—Your Committee on Finance reports that on March 20, 1919, in accordance with the order of the Board, the Clerk of the Sanitary District issued Warrant No. 100130 for $60.00 on the Treasurer of the Sanitary District, payable at the Continental and Commercial National Bank, to the order of William Sorgenfrei, in payment of the rental due for the office of the Electrical Department in the City of Blue Island. Said warrant was lost in the mail and said bank has stopped payment on said warrant. Mr. Sorgenfrei now requests that a duplicate warrant for said amount be issued to him.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Clerk of The Sanitary District of Chicago be, and he is hereby authorized and directed to issue a duplicate warrant in the sum of $60.00 payable to the order of William Sorgenfrei and deliver the same to him in lieu of the lost warrant above specified.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 3, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

Construction Account.

T. J. Forschner Contracting Company (work on Calumet Sewage Pumping Station)	$ 69,244.29
Nash Bros. (work on Contract No. 1, Desplaines River Intercepting Sewer)	39,720.33
Nash-Dowdle Company (work on Evanston Sewage Pumping Station)	33,222.52
Nash-Dowdle Company (work on Contract No. 1, Evanston Intercepting Sewer)	17,500.00
Leyden-Ortseifen Company (labor and material, Desplaines River Sewage Treatment Works)	19,607.70
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	16,288.05
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	1,312.50
Amount carried forward	$196,895.39

Amount brought forward	$196,895.39	
James O. Heyworth (work on Section 1, Calumet-Sag Channel)	11,507.56	
E. A. Hanrahan (labor cleaning outfall ditches, Calumet-Sag Channel)	480.00	
L. F. King, Clerk (expenses of employe)	44.04	
McCallum & Clark (rent)	25.00	
Orrin Eames (rent)	20.00	
Augusta Rau-Schwarz (rent)	18.00	
J. W. Landis Mill Company (stakes)	15.52	
Adams-Schillo Lumber Company (lumber)	14.16	
United States Rubber Company (hip boots)	10.40	
Nelson Bros. Laundry Company (towel service)	4.00	
Public Service Company of Northern Illinois (lighting service)	.75	
Commonwealth Edison Company (lighting service)	.50	
Public Service Company of Northern Illinois (lighting service)	.50	
		$209,035.82

Maintenance and Operation Account.

L. F. King Clerk (vehicle tax)	$ 20.00	
Mears-Slayton Lumber Company (lumber)	159.40	
Heath & Milligan Mfg. Company (paint)	120.00	
Cement Gun Company (material hose and water hose)	93.50	
E. Tillman (teaming)	42.00	
Mears-Slayton Lumber Company (lumber)	32.06	
G. Johnson (teaming)	27.00	
Burr-Vack Company (transfer cases, etc.)	23.80	
Detroit Graphite Company (paint)	21.00	
Sweet-Wallach & Co. (photographic supplies)	17.55	
H. Channon Company (hose and sprinklers)	14.50	
Burr-Vack Company (cards and guides)	11.50	
The Texas Company (crystalite oil)	8.10	
The Fred J. Ringley Company (letterheads)	7.50	
Burr-Vack Company (maps)	7.00	
Auto Radiator Mfg. Company (radiator repaired)	7.00	
H. Channon Company (wire brushes)	5.23	
H. M. Hooker Glass & Paint Company (lamp black oil)	4.50	
Geo. B. Carpenter & Co. (compression bibbs)	3.82	
Parker's Towel Supply Company (towel service)	1.60	
Arthur Jones Electric Company (fuses)	1.02	
North Shore Ash Company (hauling ashes, Lawrence Ave. Pumping Station)	172.80	
H. W. Johns-Manville Company (sea rings, Lawrence Ave. Pumping Station)	16.19	
Stebbins Hardware Company (mortar hose and force cup, Lawrence Ave. Pumping Station)	7.00	
Gulick-Henderson Company (sampling coal for analysis, Lawrence Ave. Pumping Station)	6.50	
Kenwood Trucking & Teaming Company (carting cinders, 39th St. Pumping Station)	160.00	
Buissono Bros. Mfg. Company (labor and material, 39th St. Pumping Station)	162.28	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	17.00	
A. Daigger & Co. (supplies, 39th St. Pumping Station)	15.60	
Whitney & Ford (swing check valve, 39th St. Pumping Station)	3.44	
		1,188.89
Amount carried forward		$210,224.71

Amount brought forward		$210,224.71
Illinois and Michigan Canal and Illinois River Conditions Department.		
Crown Garage (repairs)	$ 46.13	
Hotel Atlantic (expenses of D. H. Dugan)	29.85	
E. H. Heilbron (expenses)	23.37	
L. Gould & Co. (paper)	4.90	
		104.25
Law Department.		
Mead & Wheeler (imitation mahogany tops, etc.)	$ 99.40	
Mead & Wheeler (bookcase, etc.)	26.40	
West Publishing Company (subscription)	11.00	
Burr-Vack Company (scrap books)	7.50	
Samuel P. Irwin (subscription)	5.00	
Callaghan & Co. (Illinois Supreme Court Reports)	3.27	
A. Hannibal (repairing chair)	2.50	
John McGillen, Clerk (witness fees, Mulcahy vs. District)	13.75	
L. F. King, Clerk (expenses of employe)	67.50	
L. F. King, Clerk (expenses of employe)	13.52	
Martin Delaney (services rendered and expenses incurred)	202.05	
		451.89
Clerical Department.		
Underwood Typewriter Company (adjusting machine)		1.05
Treasury Department.		
Bentley, Murray & Co. (printing)		33.00
Real Estate Department.		
Childs, Young & Wood (insurance)	$ 62.50	
Ben D. Jones, Treasurer, Will County (taxes)	16.82	
A. Hannibal (repairing chair)	4.50	
Riddle & Wunderle Company (pencils, etc.)	4.05	
Underwood Typewriter Company (adjusting machine)	.75	
		88.62
Police Department.		
Geo. B. Carpenter & Co. (duck curtains)		42.00
General Account.		
Fred Klein Company (printing Proceedings)	$ 459.25	
Fred Klein Company (printing Proceedings)	145.75	
Hinckley & Schmitt, Inc. (drinking water)	51.00	
L. F. King, Clerk (expenses of Asst. Attorney Hall)	71.39	
L. F. King, Clerk (expenses of employe)	14.40	
John McGillen, Clerk (expenses of employe)	34.57	
L. F. King, Clerk (expenses of employe)	27.52	
L. F. King, Clerk (expenses of employe)	22.27	
		826.15
Electrical Department.		
Michigan Tire Company (tires)	$ 226.02	
Illinois Testing Laboratory (repairing ammeter)	9.80	
L. F. King, Clerk (vehicle licenses)	220.00	
The Ohio Brass Company (porcelain insulation)	436.70	
General Electric Company (demand meter, etc.)	373.53	
Central Electric Company (cross arms, etc.)	239.08	
Central Electric Company (flashlight complete, etc.)	180.64	
National Carbon Company (brushes)	170.72	
Stebbins Hardware Company (stock and dies complete, etc.)	71.49	
Burr-Vack Company (carbon paper, etc.)	42.80	
H. M. Hooker Glass & Paint Company (iron ore varnish)	37.50	
Commonwealth Edison Company (friction tape)	37.24	
Amounts carried forward	$ 2,045.52	$213,817.19

Amounts brought forward	$ 2,045.52	$213,817.19
Overland Motor Company (radiator hose, etc.)	35.18	
Air Reduction Sales Company (acetylene, etc.)	28.98	
S. & L. Motor Company (spark plug wire, etc.)	28.14	
John Naghten & Co. (insurance)	23.13	
Holman Soap Company (soap powder)	23.04	
Commonwealth Edison Company (rubber bushings, etc.)	16.56	
Windle Garage (rental)	13.50	
City Collector, City of Chicago (restoring pavement)	12.00	
Inter-State Brass Company (brass tubing)	6.17	
Flavin Marble Mill (beveling marble)	6.00	
Henry Stuckart (lock set, etc.)	5.85	
Fuller-Morrison & Co. (first aid supplies)	4.85	
Garret J. Cushing (personal injuries)	25.00	
Aurilla Scully, Admx. (compensation for death)	50.00	
		2,323.92
Grand Total		$214,095.59

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel *(except as to voucher to the T. J. Forschner Contracting Company, for work on Calumet Sewage Pumping Station, for $69,244.29, on which Mr. Sergel voted "nay")*, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance *(except as to voucher to the T. J. Forschner Contracting Company, for work on Calumet Sewage Pumping Station, for $69,244.29, on which Mr. Nance voted "nay")*—Seven on all vouchers and eight on all not excepted).

Nays—None *(except as above stated)*.

TEMPORARY CHAIRMAN.

President Sergel called Mr. Healy to the chair, requested to be excused and left the Board room.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN:—Your Committee on Engineering reports that on May 22, 1919, (page 609 of the Proceedings) the Sanitary District entered into an agreement with the City of Chicago covering the furnishing of electrical energy to the City of Chicago for its electric street lighting system and performing certain work in connection with said system.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he states that under the terms of said contract, the Sanitary District agreed to rearrange, change, protect or rebuild all exposed or unprotected transmission lines, lighting circuits, cables or other electrical equipment, under in or on viaducts and elevated structures, subways and on streets, alleys or public places and to paint electric light poles and equipment thereon.

Your Committee further reports that

the Electrical Engineer has prepared specifications for doing said work which have been approved by the Commissioner of Gas and Electricity of said City and has presented the same to your Committee for its approval.

Your Committee further reports that it has considered said specifications, has approved the same and therefore recommends the passage of the following order:

Ordered, That the specifications prepared by the Electrical Engineer for the performance of the work above specified be, and the same are hereby approved, and it is further

Ordered, That the Clerk be, and he is hereby authorized and directed to advertise for bids for the performance of the work above specified in accordance with the specifications so prepared by the Electrical Engineer.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering respectfully recommends the adoption of the following preamble and order:

WHEREAS, The General Assembly of Illinois recently passed an Act authorizing The Sanitary District of Chicago, by and through an amendment to the Act creating sanitary districts and to remove obstructions in the Desplaines and Illinois Rivers, to build and maintain highways along canals or channels built by the District or lands owned by the District, and to repair such highways already constructed in order to make accessible dock property owned by the District; and

WHEREAS, It will be advisable before the Board of Trustees defines and adopts any policy in the matter of road building to have the data and information as to the various kinds of roads, methods of construction and maintenance, and the expense in connection therewith, assembled and presented to the Committee on Engineering, with a view to having that Committee formulate and present to this Board for final action a report with reference to the construction of such roads and the expense in connection therewith, together with the recommendation of said Committee in the premises; it is, therefore,

Ordered, That the Chief Engineer be, and he is hereby, authorized, directed and empowered to make a study and investigation of roads and road building, including the various kinds of material available for the same, and of available locations for such roads upon the property of The Sanitary District of Chicago, and report such information, together with his recommendation as to the kind and character of roads to be constructed, where the same shall be located, and also plans and specifications for such roads as he shall recommend, together with estimate of the cost and expense of building the same, and pre-

sent such report to the Committee on Engineering.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a final certificate from the Chief Engineer that the work covered by the contract of the Hutchins Lumber & Storage Co., dated May 1, 1919 (page 459 of the Proceedings), for furnishing and delivering Oregon fir timbers for trestles for supporting tracks of the Grand Trunk Western Railway Company at the Calumet-Sag Channel, in the City of Blue Island, Illinois, has been completed in accordance with all the terms and conditions of the contract and to the satisfaction of the Chief Engineer, and your Committee having read said final certificate hereto attached, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to pay to the Hutchins Lumber & Storage Co., upon the voucher of the Chief Engineer, the total sum of $5,728.86, found to be due under said contract, upon the execution by said Company of a receipt in full of all claims and demands arising out of or resulting from the performance of the work under said contract, and also upon the execution of an affidavit by an officer of said Company that all materialmen, mechanics and workmen employed by said Company have been paid in full; said payment, however, to be made subject to any unaccrued or unmatured obligations imposed by said contract.

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

FINAL CERTIFICATE.

June 19, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I transmit herewith final voucher in the amount of $5,728.86 in favor of Hutchins Lumber & Storage Company, on its contract dated May 1, 1919, for furnishing and delivering timbers for trestles for supporting tracks of the Grand Trunk Western Railway Co. at the Calumet-Sag Channel in the City of Blue Island, Illinois.

This contract has been fully completed in accordance with all the terms and conditions thereof.

Very Respectfully,
G. M. WISNER,
Chief Engineer.

Recommended by:
C. R. DART,
Chief Bridge Engineer.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that on November 2, 1916 (page 1443 of the Proceedings) the Sanitary District entered into an agreement with the Baltimore and Ohio Chicago Terminal Railway Company, the Grand Trunk Western Railway and Jacob M. Dickinson, receiver of the Chicago, Rock Island and Pacific Railway Company, by the terms of which certain filling, track laying and ballasting made necessary by the removal and relocation of certain tracks of said railroad companies at the crossing of said railroads and the Calumet-Sag Channel of the Sanitary District, was to be done at the expense of the Sanitary District.

He further states that in constructing the new bridge across said channel for the Grand Trunk Western Railway it is necessary to divert the present tracks of said railway around the site of the new bridge. This work requires the construction of a trestle under the diverted track nearest the bridge site, the laying of railroad tracks thereon and other work of track diversion which can only be performed by bridge carpenter and track laying gangs. The officials of said company state that at the present time the company would have to organize new gangs in order to do said work and the work would cost the Sanitary District considerably more than if Guthrie & Co., Inc., which is doing similar work in the vicinity, would undertake it. The Chief Engineer therefore requests authority to order A. Guthrie & Co., Inc., to perform said work under the extra work clause of its contract for the excavation of Contract Section 13 of the Calumet-Sag Channel at a cost of not to exceed $15,000.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized to order A. Guthrie & Co., Inc., to perform the work above specified under the extra work clause of its contract for the construction of Contract Section 13 of the Calumet-Sag Channel provided the cost of same shall not exceed the sum of $15,000.00.

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler and Mueller—Six.

Nays—None.

Passed and not voting—Mr. Nance—One.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a

communication from the Chief Engineer, in which he states that on November 2, 1916 (page 1443 of the Proceedings), the Sanitary District entered into an agreement with the Baltimore & Ohio Chicago Terminal Railway Company, the Grand Trunk Western Railway and Jacob M. Dickinson, receiver of the Chicago, Rock Island and Pacific Railway Company, by the terms of which certain filling, track laying and ballasting made necessary by the removal and relocation of certain tracks of said railroad companies at the crossing of said railroads and the Calumet-Sag Channel of the Sanitary District, was to be done at the expense of the Sanitary District.

He further states that in constructing the new bridge across said channel for the Grand Trunk Western Railway it is necessary to divert the present tracks of said railway around the site of the new bridge. This work requires a trestle under the diverted track nearest the bridge site, the piles for which must be driven by a railroad pile driver running on a temporary track. The officials of said company recently stated that said company had a pile driver which would be in Chicago July 7, 1919, which it would furnish for said work if a temporary track and pile points were then ready. He further states that in order to avoid any delay, he ordered A. Guthrie & Co., Inc., to lay said temporary track and furnish said pile points under the extra work clause of its contract for the excavation of Contract Section 13 of the Calumet-Sag Channel at a cost of not to exceed $500.00, and he requests that his action in the premises be ratified and confirmed.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the action of the Chief Engineer in ordering A. Guthrie & Co., Inc., to perform the work above specified and furnish said iron pile points under the extra work clause of its contract for the construction of Contract 13 of the Calumet-Sag Channel be, and the same is hereby ratified and confirmed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler and Mueller—Six.

Nays—None.

Passed and not voting—Mr. Nance—One.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that by the terms of the existing contract between the Sanitary District and the International Harvester Company said company is limited in its use of electrical energy to certain hours of the day and has requested permission to use said electrical energy during other hours when said use will not interfere with the supply of electrical energy to other consumers.

The Electrical Engineer further states that the use of additional electrical energy at the present time will not interfere with the supply to other consumers

and will result in an increased income to the Sanitary District.

Your Committee having considered the matter is of the opinion that the request of said company should be granted, and therefore recommends the passage of the following order:

Ordered, That the existing contract between the Sanitary District and the International Harvester Company be modified to permit said company to use electrical energy during such hours and for such a period of time as shall be authorized by the Electrical Engineer, and that whenever he is of the opinion that it is not to the advantage of the Sanitary District to permit such consumer to use such electrical energy he shall notify said company and said company shall thereupon cease to use said additional electrical energy.

Respectfully submitted,
H. E. LITTLER,
Chairman.

MATT A. MUELLER,
WM. J. HEALY,
WALLACE G. CLARK,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the following contracts for residence lighting have been executed by him:

Mrs. E. F. Beyer, 390 Gregory street.

Mrs. Chas. Woods, 215 Grunewald street.

Walter Stearman, 152 Vermont street.

Ray L. Thornton, 318 Olive street.

John G. Koraleski, 215 Grunewald street.

Ed. Carlson, 195 Cochran street.

Louis Storz, 48 Broadway.

Percival W. Lake, 584 Western avenue.

All in Blue Island, Ill.

H. E. Paulsson, 3121 Winfield avenue.

Samuel Bryant, 6829 Stanley avenue.

J. V. Swanson, 6440 26th place.

Jaroslav Peroutka, 6539 W. 27th place.

Lee L. Emmons, Jr., 6435 Sinclair avenue.

Evan Anderson, 3121 Winfield avenue.

Leon T. Moore, 3322 Berkeley avenue.

F. C. Folts, 3307 Ivison avenue.

John G. Klucke, 3101 Harlem avenue.

A. B. Hagen, 3209 Ivison avenue.

Frank J. Mally, 3334 Hiawatha avenue.

All in Berwyn, Ill.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the action of the Electrical Engineer in executing the contracts for residence lighting with the parties above mentioned be and the same is hereby ratified and confirmed.

Respectfully submitted,
H. E. LITTLER,
Chairman.

MATT A. MUELLER,
WALLACE G. CLARK,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, July 3, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith transmits a form of contract to be entered into between The Sanitary District of Chicago and the Chicago and West Towns Railway Company.

By the terms of this contract the Sanitary District agrees to supply said company with 3,000 kilowatts of electrical energy and intermittent demands not to exceed 500 kilowatts during eight months of each year for a period of five years.

To serve said consumer certain line extensions must be made, the estimated cost of which will not exceed $20,000.00 which is to be advanced by said consumer and repaid to it by the Sanitary District by crediting to it the bill for electricity furnished during each alternate month of the term of said contract until the total amount has been paid.

The rates are based on a demand charge of 50 cents per kilowatt per month, on 3,500 kilowatts, known as the "demand charge;" also there is an excess demand charge of $2.50 per kilowatt in excess of 3,500 kilowatts, and a consumption charge for electricity consumed of 9-10 cents per kilowatt hour for the first 100,000 kilowatt hours and 5-10 cent per kilowatt hour for the excess consumed in any one month over 100,000 kilowatt hours.

The other terms of the contract are of the standard form used by the Sanitary District in such cases.

Said contract has been approved by the Electrical Engineer and by the Attorney.

Your Committee having considered said contract, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago, and the Clerk, be, and they are hereby authorized and directed to execute said contract in duplicate when the same has been executed by the properly authorized officials of said Chicago and West Towns Railway Company.

Respectfully submitted,

H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WALLACE G. CLARK,
WILLIAM J. HEALY,
GEORGE W PAULLIN,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Employment

Mr. Clark presented the following report from the Committee on Employment:

CHICAGO, July 3, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Engineering Department.

A. J. Canary, Chemical Assistant (temporary), $100.00 per month.

Arthur Anderson, Chemical Assistant (temporary), $100.00 per month.

Thos. P. Bonfield, Rodman, $100.00 per month.

Electrical Department.

Hugo Hinkel, Lineman (temporary), $165.00 per month.

Hugh P. Ward, Chauffeur (vacation period), $125.00 per month.

INCREASES.

Engineering Department.

Walter P. Creech, from Sub-Instrument Man, at $130.00 per month, to Instrument Man at $150.00 per month.

Max Nork, Machinist, from 85 cents per hour to 95 cents per hour.

Electrical Department.

W. O. Wilson, Cable Splicer Foreman, from $200.00 per month to $1.12½ per hour.

A. M. Anderson, Cable Splicer, from 87½ cents per hour to $1.00 per hour.

E. Pearson, Cable Splicer, from 87½ cents per hour to $1.00 per hour.

J. J. Elliott, Cable Splicer, from 87½ cents per hour to $1.00 per hour.

A. J. Peck, Cable Splicer, from 87½ cents per hour to $1.00 per hour.

H. J. Berninger, Cable Splicer Helper, from 62½ cents per hour to 75 cents per hour.

Harry Johnson, Cable Splicer Helper, from 62½ cents per hour to 75 cents per hour.

W. Bunsworth, Cable Splicer Helper, from 62½ cents per hour to 75 cents per hour.

J. E. Regan, Cable Splicer Helper, from 62½ cents per hour to 75 cents per hour.

A. Suffern, Machinist, from 85 cents per hour to 95 cents per hour.

Fred Westerberg, Machinist, from 85 cents per hour to 95 cents per hour.

B. H. Stuber, Machinist, from 85 cents per hour to 95 cents per hour.

Charles Larson, Machinist, from 85 cents per hour to 95 cents per hour.

Edward Held, from Operator at $155.00 per month to Load Dispatcher at $180.00 per month, during vacation period.

Operating Engineers at the Thirty-ninth Street Pumping Station and the Lawrence Avenue Pumping Station of the Engineering Department, the same scale of wage, effective July 1, 1919, as will be paid the Engineers of the City of Chicago doing similar work. Said scale of wage to be decided by the Chief Engineer.

REINSTATEMENTS.

Due to Honorable Discharge from the U. S. Army Service.

Electrical Department.

Fred Henderson, Assistant Repairman, $130.00 per month.

Respectfully submitted,

WALLACE G. CLARK,
Vice-Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Clark moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

RECESS.

Mr. Clark moved that the Board take a recess for five minutes to permit the Committee on Engineering to meet and report back to the Board its recommendations on the bids received today for the purchase of the two old steel railroad bridges.

The motion prevailed.

After the expiration of five minutes the Board reconvened.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 3, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at today's meeting of the Board (page 850 of the Proceedings), bids for the purchase of two steel deck plate girder railroad bridges from the old Chicago, Rock Island and Pacific Railway Company bridge over Stony Creek in Blue Island, Illinois, having considered all proposals presented and the qualifications of each bidder, together with a report submitted by the Chief Engineer, finds that the highest bid for one of said steel deck plate girder railroad bridges is that of L. Morris & Company in the sum of $14.00 per net ton f. o. b. the site of the work, but that said bid is informal for the reason that it does not comply with the specifications, as a bid was formally submitted for only one bridge and an attached letter offered to bid the same price for the other bridge if the Sanitary District loaded it on cars.

Your Committee further reports that the next highest bid received for said two steel deck plate girder railroad bridges is that of Getz-Mitchell & Company in the sum of $9.48 per net ton actual weight of the steel in one of said bridges, and the sum of $10.15 per net ton actual weight of the steel in the other of said bridges.

Your Committee further reports that it is of the opinion that said bidder, Getz-Mitchell & Company, is competent to comply satisfactorily with the terms and conditions of said contract for the purchase of said two steel deck plate girder railroad bridges, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the bid of L. Morris & Company herein mentioned be, and the same is hereby rejected for the reason that it does not comply with the specifications; and it is further

Ordered, That the contract for the purchase of said two steel deck plate girder railroad bridges be and the same is hereby awarded to Getz, Mitchell & Company for the prices above specified named in its bid; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District be and he is hereby authorized and directed to accept said bid of Getz-Mitchell & Company for the purchase of said two steel deck plate girder railroad bridges for the prices specified in said bid.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
PATRICK J. CARR,
H. E. LITTLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Carr presented the following resolution:

RESOLVED, That The Sanitary District of Chicago be and remain closed on Friday, July 4, and Saturday, July 5, except as to such employes as are necessary for the proper conduct of the business of the District.

Mr. Carr moved that the resolution be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

ADJOURNMENT TO A SPECIAL TIME.

Mr. Lawley moved that when the Board adjourns, it adjourn to meet on Monday, July 14, 1919, at 2 p. m., for the purpose of receiving bids on bonds taken by the Sanitary District from the City of Chicago in payment of judgments for money owed the Sanitary District for the rehabilitation of the street lighting system of the City of Chicago and for electricity furnished said city, and also for the transaction of such other business as may come before the Board.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

L. E. King

Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

ADJOURNED MEETING.

MONDAY, JULY 14, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll being called there were:

Present—Messrs. Carr, Clark Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Sergel—One.

President Sergel being absent, Mr. Lawley moved that Mr. Paullin act as temporary chairman of the meeting.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meeting of June 26, 1919, be approved, as printed, without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 14, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN:—Your Committee on Finance reports that the Sanitary District in carrying out the terms and conditions of an agreement between the Sanitary District and the City of Chicago, dated October 27, 1910, (page 1115 of the Proceedings) and four supplementary and amendatory agreements thereto all relating to the rehabilitation, extension and operation of the electric street lighting system of said City, constructed four new substations for said City and furnished and installed therein, and also furnished and installed in other substations in said City and in the streets, alleys and public places thereof, certain buildings, transformers, regulators, meters, poles, cables, wires, conduits, appliances and equipment.

Your Committee further reports that it is advised by the Attorney that the officials of said City have requested the Sanitary District to execute and deliver to it such quitclaim deeds, bills of sale and other legal documents as may be necessary to specifically transfer to said City the legal title in and to the property above described in order to make a complete and final settlement between said Sanitary District and said City of all the terms and conditions of said agreements relating to said property.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and Clerk be, and they are hereby, authorized and directed to execute for and on behalf of the Sanitary District and in its name all such quitclaim deeds, bills of sale and other legal documents as in the opinion of the Attorney may be necessary in order to fully comply with the request of said City above set forth.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 14, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that tax anticipation warrants of the Sanitary District in the sum of $3,000,000.00, the issuance of which was authorized by an ordinance of the Board of Trustees of the Sanitary District passed October 17, 1918 (page 1173 of the Proceedings) will mature on July 15, 1919.

Your Committee further reports that interest on said $3,000,000.00 tax anticipation warrants at the rate of five per cent per annum, amounting to the sum of $112,500.00 will also fall due on July 15, 1919.

Your Committee having considered

the matter, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant payable to the order of the Treasurer of the Sanitary District in the sum of $3,112,500.00 to pay the principal and interest due July 15, 1919, on the tax anticipation warrants of the Sanitary District above referred to as follows:

The principal of 25 tax anticipation warrants, in the sum of $100,000.00 each, numbered consecutively from 1 to 25, both inclusive	$ 2,500,000.00
The principal of 10 tax anticipation warrants, in the sum of $50,000 each, numbered consecutively from 26 to 35, both inclusive	500,000.00
Interest on said tax anticipation warrants at the rate of 5 per cent per annum from October 15, 1918 to July 15, 1919	112,500.00
Total	$ 3,112,500.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

WILLIS O. NANCE,
GEORGE W. PAULLIN,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 14, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance respectfully reports that immediately after the adoption of the report and passage of the order of July 3 by the Board of Trustees with reference to the sale of three million dollars' worth of bonds of the City of Chicago, five million dollars' worth of said bonds to be received by the The Sanitary District of Chicago from the City of Chicago in payment of the debt due the Sanitary District from the City of Chicago, the Chairman of the Committee on Finance called upon the Comptroller of the City of Chicago and was informed by the latter that it would be possible to get only three million dollars' worth of said bonds signed up and delivered to the Sanitary District on or before July 15, 1919;

That a special meeting or conference was called on July 9th of all of the Trustees of the Sanitary District then in the City, and said Trustees, after ascertaining the facts, reached the conclusion that the Chairman of the Committee on Finance and the Clerk should be authorized and directed to secure the best bids possible for said three millions dollars' worth of bonds of the City of Chicago and present the result of their efforts at the adjourned meeting of the Board of Trustees to be held on Monday, July 14, at 2 o'clock p. m.;

That they should by circular letter notify every bank and bond house in the City of Chicago and secure such advertising as they deemed expedient and likely to produce the desired results—namely, to get the best bids possible for such bonds.

Your Committee further reports that

a circular letter was prepared and printed on the stationery of the Sanitary District as follows:

"Municipal Bond Sale.

"To Bankers and Bond Buyers:

"Three millions of City of Chicago Judgment Funding 4 per cent Serial Gold Bonds, approved by the voters at a regular election April 1, 1919, in $1,000 denomination. Maturities in years A. D. 1930, 1931, 1936, 1937, 1938 and 1939 in $500,000 amounts respectively. All issued dated July 1, 1919, are now owned and in possession of The Sanitary District of Chicago.

"Proposals for the purchase and sale of these $3,000,000.00 of bonds will be received Monday, July 14, 1919, until 11 o'clock a. m.

"Proposals should be addressed to "Chairman of Committee on Finance, The Sanitary District of Chicago," 910 South Michigan Avenue, Seventh Floor, Chicago, Illinois, and delivered to the Clerk of The Sanitary District before 11 a. m. Monday, July 14, 1919.

"Validity of these bonds have been passed upon by Messrs. Wood and Oakley, Attorneys, and a copy of their favorable opinion will be furnished upon request.

"The City of Chicago has provided by Ordinance, a Sinking Fund to care for these bonds upon maturity.

"These bonds come lawfully into the possession of The Sanitary District of Chicago from the City of Chicago in payment of judgments in favor of The Sanitary District for constructing the Electric Lighting Plant and Equipment for the city.

"The right to reject any and all proposals is reserved.

"The Sanitary District of Chicago.
"L. F. King, *Its Clerk.*

"Chicago, July 9, 1919."

That said letter was mailed on July 9, 1919, to all of the banks in Chicago and to all the leading bond houses of Chicago, the total number of said letters being about 150; that in addition thereto the Clerk by means of telephone calls and personal visits to various banks and bond houses, supplemented said letter for the purpose of getting before all possible purchasers of said bonds the fact that said sale was contemplated and that said bids were desired on or before 11 o'clock a. m., July 14, 1919; that in addition to the foregoing said letter was published as a full page ad on page 56 of the Economist, issued July 12.

Your Committee further reports that every available means was utilized to secure full publicity as to the proposed sale of said bonds of the City of Chicago and as to the time within which bids therefor should be received by The Sanitary District of Chicago.

Your Committee further reports that five bids were received and opened by the chairman of this committee on the afternoon of this, the 14th day of July, which bids are for three million dollars City of Chicago Judgment Funding Bonds to be in coupon form and in denominations of $1,000 each, dated July 1, 1919, due and payable $500,000 each year for the years 1930, 1931, 1936, 1937, 1938 and 1939, and said bonds bearing interest at the rate of 4 per cent per annum, payable semi-annually, which are as follows:

1. Paine-Webber & Company of New York, Chicago and Boston, with offices in the Rookery Building, Chicago, $2,805,000.

2. The Northern Trust Company, Illinois Trust & Savings Bank, William R. Compton Company and the Bankers' Trust Company of New York, jointly bid the sum of $2,837,155.

3. National City Company, E. H. Rollins & Sons, A. D. Leach & Com-

pany and Halsey, Stuart & Company in a joint bid of $2,809,770.

4. James L. Martin & Company for themselves and Esterbrook Company, R. L. Day & Company and Merrill Oldham Company of Boston, $2,825,700.

5. Harris Trust & Savings Bank of Chicago, Continental & Commercial Trust & Savings Bank of Chicago, First Trust & Savings Bank of Chicago and the Merchants' Loan & Trust Company of Chicago, in a joint bid of $2,824,911.

Each of said bids includes accrued interest to date of delivery of bonds.

From the foregoing it appears that the joint bid of the Northern Trust Company, Illinois Trust & Savings Bank of Chicago, William R. Compton Company and the Bankers' Trust Company of New York, for the sum of $2,837,155, is the highest and best bid received for said three million dollars City of Chicago bonds.

Your Committee having considered the matter and being fully advised in the premises, recommends the passage of the following order:

Ordered, That the joint bid of the Northern Trust Company, Illinois Trust & Savings Bank of Chicago, William R. Compton Company and the Bankers' Trust Company of New York, in the sum of $2,837,155 and accrued interest to date of delivery, being the highest and best bid offered for said three million dollars City of Chicago Judgment Funding Bonds, dated July 1, 1919, as hereinbefore set forth and described, be and the same is hereby approved and accepted; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to deliver said three million dollars City of Chicago Judgment Funding Bonds aforesaid to said Northern Trust Company, Illinois Trust & Savings Bank of Chicago, William R. Compton Company and the Bankers' Trust Company of New York, upon receipt in cash from said purchasers of the said sum of $2,837,155, with accrued interest on said bonds to date of delivery, and to execute and deliver any and all documents, papers or letters which are or may be necessary in connection with the consummation of the sale and delivery of said bonds and receipt of consideration therefor as above stated.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 14, 1917.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payment of payrolls and recommends that they be approved and ordered paid:

Miscellaneous Accounts.

L. F. King, Clerk (repair to walls, Main Channel bridges and North Shore Channel bridges)—		
Construction Account	$ 919.02	
Maintenance and Operation Account	4,006.85	
		$ 4,925.87
Electrical Department.		
L. F. King, Clerk (semi-monthly payroll)		17,240.17
Grand Total		$ 22,166.04

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

L. F. King.

Clerk.

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UNIVERSITY OF ILLINOIS LIBRARY
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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, JULY 17, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll being called, there were:

Present—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Absent—Mr. Sergel—One.

President Sergel being absent, Mr. Lawley moved that Mr. Paulin act as temporary chairman of the meeting.

The motion prevailed.

BIDS.

The Clerk opened and read the bids received for lubricating, transformer and other oils, gasoline and kerosene, as shown on page 878A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief and Electrical Engineers for tabulation and to the Committee on Finance for report.

The motion prevailed.

The Clerk opened and read the bids received for changing the present City of Chicago 5,000 volt aerial construction under subways, to steel pipe, under-

ground armored cable, or standard underground construction, for painting tubular steel poles and equipment thereon, and for painting cast iron lamp posts, as shown on the schedule printed on page 878B of the Proceedings.

Mr. Littler moved that the bids be referred to the Electrical Engineer for tabulation and to the Committee on Electrical Development for report.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the regular meeting of July 3, 1919, be approved as printed, without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of June, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR JUNE, 1919.

Receipts.

Balance on hand at date of last report		$405,522.96
Electrical Department (Working Capital)	$ 72,766.13	
Land Revenue	4,648.30	
Water Service	4,900.00	
County Collector	300,000.00	
Collector, Town of Thornton	6,923.08	
Taxes on District Property	1,916.53	
Pumping Stations (Maintenance and Operation)	357.69	
Bills Receivable (United States Crushed Stone Co.)	333.33	
Interest on Deposits (John A. McCormick, Former Treasurer)	37.50	
Miscellaneous Engineering Operating Expense	4.15	
Sanitary Improvements, Sewage and Special Investigations.	.75	
Interest on Deposits (Geo. M. Reynolds, Treasurer)	422.63	
Interest on Deposits (Clerk's Emergency Fund)	28.42	
Total cash received		392,338.51
		$797,861.47

Expenditures.

Engineering Department, Construction Account	$236,381.73	
Engineering Department, Maintenance and Operation Account	20,125.10	
Illinois & Michigan Canal & Illinois River Conditions Dept.	1,250.18	
Law Department	78,598.57	
Cost of Law Cases	400.00	
Clerical Department	2,245.32	
Treasury Department	104.16	
Real Estate Department	326.93	
Police Department	2,980.70	
General Account	39,597.40	
Electrical Department	54,524.78	
Interest and Premium on Bonds	102,520.00	
Clerk's Emergency Fund, Lawrence F. King, Clerk	20,000.00	
Total cash disbursed		559,054.87
Balance on hand this date		238,806.60
		$797,861.47

G. M. Reynolds,
Treasurer.
J. R. Washburn,
Asst. Treasurer.

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THE SANITARY DISTRICT OF CHICAGO—ELECTRICAL DEPARTMENT

PROPOSALS RECEIVED FOR LUBRICATING AND TRANSFORMER OILS, GASOLINE AND KEROSENE

CHICAGO, ILL., JULY 17, 1919

No. of Bids	Name and Address of Bidders	Division A Hydro-Turbine Oil	Division B Hydraulic Governor Oil	Division C Cylinder Oil	Division D Dynamo Oil Extra-Heavy	Division E Engine Oil	Division F Gasoline Engine Oil	Division G Transformer Oil	Division H Transmission Oil	Division I Cup Grease	Division J Gasoline	Division K Kerosene	REMARKS
1	The Texas Co., Chicago, Ill.....	40c per gal.	48c per gal.	40c per gal.	48c per gal.	31c per gal.	50c per gal.	51c per gal.	9c per lb.	9c per lb.	Market Prices on	Date of Delivery.	.....
2	The Sullivan Oil Co., Chicago, Ill..	37c per gal.	37c per gal.	41c per gal.	36c per gal.	31c per gal.	38c per gal.	26c per gal.	35c per gal.	7c per lb.	.....	.....	.....
3	The Standard Oil Co., Chicago, Ill..	.437c per gal.	.327c per gal.	.473c per gal.	.313c per gal.	.213c per gal.	.433c per gal.	.253c per gal.	.433c per gal.	.066c per lb.	Market Prices on	Date of Delivery.	.....
4	Wm. H. Reid Oil Co., Chicago, Ill...	30½c per gal.	30½c per gal.	38c per gal.	36c per gal.	30½ per gal.	50c per gal.	28c per gal.	.27½c per gal.	8c per lb.	.....	.....	.....
5	Anderson Oil Co., Chicago, Ill.....	.....	.....	45c per gal.	40c per gal.	34c per gal.	42c per gal.	.....	35c per gal.	7½c per lb.	.....	.....	.....
6	Sinclair Oil Co., Chicago, Ill.....	45c per gal. 30½c per gal.	30½c per gal.	49c per gal. 40c per gal.	36c per gal.	23½c per gal.	45c per gal.	25c per gal.	40c per gal.	6c per lb.	Market Prices on	Date of Delivery.	.....
7	Peirce-Miller Oil Co., Chicago Ill...	40½c per gal.	42c per gal.	51½c per gal.	48c per gal.	39c per gal.	48c per gal.	42c per gal.	39c per gal.	10c per lb.	.....	.....	.....

Bidders and Prices Quoted.

Divisions	Item No.	Contracting and Material Co., Chicago, Ill.		F. E. Newberry Elect. Const. Co. Chicago, Ll.		W. A. Jackson Co., Chicago, Ill.	
		Unit rice	Total	Unit Price	Total	Unit Price	Total
	1	5.25	$ 3,757.50	$127.00	$ 3,810.00	$170.00	$ 5,100.00
	2	5.00	1,750.00	122.00	1,708.00	163.00	2,282.00
	3	5.00	660.00	17.00	748.00	11.00	484.00
	4	2.00	900.00	1.50	675.00	2.28	1,026.00
	5	0.00	500.00	45.00	225.00	79.25	396.25
	6						
	50	50	50.00	6.00	120.00	2.00	40.00
	75	75	27.50	8.00	80.00	2.50	25.00
	50	50	10.50	12.00	36.00	3.75	11.25
	00	00	100.00	1.00	100.00	1.60	160.00
	00	00	500.00	10.00	1,000.00	6.00	600.00
	6						
	90	90	180.00	1.00	200.00	.25	50.00
	00	00	240.00	32.00	640.00	20.00	400.00
	00	00	280.00	37.00	740.00	24.00	480.00
	65	65	650.00	1.35	1,350.00	1.40	1,400.00
	75	75	150.00	1.55	310.00	1.85	370.00
	15	15	225.00	.26	390.00	.07	105.00
	15	15	150.00	.26	260.00	.13	130.00
	02	02	300.00	.05	750.00	.03	450.00
	00	00	1,500.00	.50	375.00	.75	562.50
	00	00	100.00	1.00	100.00	.75	75.00
	00	00	.....	1.60	.....	1.75	.....
	50	50	.....	1.40	.....	1.50	.....
	25	25	.....	1.25	.....	1.00	.....
	50	50	.....	2.25	.....	3.50	.....
		$40,719.50		$43,870.77		$57,960.10	
Division B	90	$ 76,000.00		$ 2.24	$ 89,600.00	$ 2.00	$ 80,000.00
	43	2,150.00		.52	2,600.00	.90	4,500.00
		$78,150.00		$92,200.00		$84,500.00	
		$118,869.50		$136,070.77		$142,460.10	

THE SANITARY DISTRICT OF CHICAGO—ELECTRICAL DEPARTMENT

PROPOSALS RECEIVED FOR STREET LIGHTING WORK

CHICAGO, ILL., JULY 17, 1919

Divisions	Item No.	ITEMS	Estimated Quantities	Thomas Curran, Chicago, Ill.		Freeman-Sweet & Co., Chicago, Ill.		Contracting and Material Co., Chicago, Ill.		F. E. Newberry Elect. Const. Co. Chicago, Ill.		W. A. Jackson Co., Chicago, Ill.	
				Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
	1	For each manhole in street, as specified, exclusive of valve, trap, sewer connection, and of cost of removing or replacing street pavement	30	$.....	$.....	$143.00	$ 4,290.00	$125.25	$ 3,757.50	$127.00	$ 3,810.00	$170.00	$ 5,100.00
	2	For each manhole in parkway complete as specified, exclusive or valve, trap and sewer connections	14	.....	.....	140.00	1,960.00	125.00	1,750.00	122.00	1,708.00	163.00	2,282.00
	3	For each connection from manholes to sewer, including 4" back pressure valve and trap and 6' 0" of pipe or less and connection at sewer	44	.....	.....	21.00	924.00	15.00	660.00	17.00	748.00	11.00	484.00
	4	For each foot of additional pipe for sewer connections in excess of 6' 0" furnished and installed complete as specified	450 Feet	.....	.....	.95	427.50	2.00	900.00	1.50	675.00	2.28	1,026.00
	5	For each hand hole complete as specified, exclusive of cost of removing and replacing pavement	5	.....	.....	70.00	350.00	100.00	500.00	45.00	225.00	79.25	396.25
	6	For each trench foot of 1—3" single duct conduit installed in street exclusive of cost of removing and replacing pavement { Tile Duct	150	.....	.....	.90	135.00	1.00	150.00	1.40	210.00	1.00	150.00
			Tr. Feet	.....	.....	.85	127.50	1.10	165.00	1.30	195.00	1.00	150.00
	7	For each trench foot of 2—3" single duct conduit installed in street exclusive of cost of removing and replacing pavement { Tile Duct	1000	.....	.....	1.20	1,200.00	1.43	1,430.00	1.60	1,600.00	1.35	1,350.00
			Tr. Feet	.....	.....	1.15	1,150.00	1.53	1,530.00	1.50	1,500.00	1.35	1,350.00
	8	For each trench foot of 3—3" single duct conduit installed in street exclusive of cost of removing and replacing pavement { Tile Duct	150	.....	.....	1.50	225.00	1.50	225.00	1.80	270.00	1.75	262.50
			Tr. Feet	.....	.....	1.45	217.50	1.60	240.00	1.70	255.00	1.75	262.50
	9	For each trench foot of 1—4" single duct conduit installed in parkway, complete as specified { Tile Duct	150	.....	.....	.88	132.00	1.00	150.00	1.40	210.00	1.00	150.00
			Tr. Feet	.....	.....	.83	124.50	1.10	165.00	1.30	195.00	1.00	150.00
	10	For each trench foot of 2—4" single duct conduit installed in parkway, complete as specified { Tile Duct	750	.....	.....	1.15	862.50	1.42	1,063.50	1.60	1,200.00	1.35	1,012.50
			Tr. Feet	.....	.....	1.07	802.50	1.53	1,148.50	1.50	1,125.00	1.35	1,012.50
	11	For each trench foot of 1—2½" steel pipe lateral installed in street, exclusive of cost of removing and replacing pavement	750										
			Tr. Feet	.....	.....	.90	675.00	.92	690.00	1.60	1,200.00	1.26	945.00
	12	For each trench foot of 1—2½" steel pipe lateral installed in parkway, complete as specified	350										
			Tr. Feet	.....	.....	.90	315.00	.90	315.00	1.60	560.00	1.26	441.00
	13	For each trench foot of 2—2½" steel pipe laterals installed in street, exclusive of cost of removing and replacing pavement	250										
			Tr. Feet	.....	.....	1.70	425.00	1.40	350.00	2.05	512.50	2.15	537.50
	14	For each trench foot of 2—2½" steel pipe laterals installed in parkway, complete as specified	150										
			Tr. Feet	.....	.....	1.70	255.00	1.40	210.00	2.05	307.50	2.15	322.50
	15	For each foot of pipe of 1—2½" steel pipe lateral driven under pavement, installed complete as specified	100 Ft. of Pipe	.....	.....	1.40	140.00	1.37	137.00	2.00	200.00	1.50	150.00
	16	For each foot of 2—2½" steel pipe laterals driven under pavement, complete as specified	60 Ft. of Pipe	.....	.....	1.40	84.00	2.00	120.00	1.75	105.00	3.00	180.00
	17	For each 2½" steel pipe bend, installed complete as specified	36	.....	.....	3.14	113.04	12.00	432.00	5.60	201.60	3.75	135.00
	18	For each 3" steel pipe bend, installed complete as specified	40	.....	.....	5.25	210.00	14.00	560.00	6.50	260.00	8.15	326.00
	19	For each foot of 2½" steel pipe laterals, fastened to pole, installed complete as specified	1500 Ft. of Pipe	.....	.....	.80	1,200.00	.80	1,200.00	.80	1,200.00	2.40	3,600.00
	20	For each square yard of cutting and removing street pavements	700 Sq. Yards	.....	.....	1.20	840.00	2.00	1,400.00	1.50	1,050.00	5.00	3,500.00
	21	For each square yard of temporary street re-paving, all types	700 Sq. Yards	.....	.....	.70	490.00	.65	455.00	.25	175.00	1.00	700.00
	22	For each square yard of permanent street re-paving, all types	800 Sq. Yards	.....	.....	3.80	3,040.00	4.00	3,200.00	2.50	2,000.00	3.75	3,000.00
	23	For each square yard of cutting and removing sidewalks and making permanent repairs to same	200 Sq. Yards	.....	.....	1.82	364.00	3.00	600.00	3.00	600.00	3.25	650.00
	24	For each end of subway constructed as shown on drawing No. 7601 and furnishing all material for same, using s/c potheads	40	.....	.....	35.00	1,400.00	30.00	1,200.00	38.00	1,520.00	30.60	1,224.00
	25	For each end of subway constructed as shown on drawing No. 7601 and furnishing all material for same, using 2 c potheads	10	.....	.....	49.00	490.00	45.00	450.00	61.00	610.00	37.00	370.00
	26	For each foot of No. 6 5,000 V. 1/c cable in steel pipe to connect both ends of subway, as shown on drawing No. 7601	2500 Ft.	.....	.....	1.25	3,125.00	1.20	3,000.00	1.30	3,250.00	2.00	5,000.00
	27	For each foot of 2 No. 6 5,000 V. 1/c cable in steel pipe to connect both ends of subway, as shown on drawing No. 7601	650 Ft.	.....	.....	1.45	942.50	1.50	975.00	1.60	1,040.00	2.30	1,495.00
	28	For each foot of No. 6 5,000 V. s/c 1/c cable in conduit or lateral, complete as specified	4000 Ft.	.....	.....	.22	880.00	.37	1,480.00	.35	1,400.00	.69	2,760.00
	29	For each foot of 2 No. 6 5,000 V. s/c 1/c cable furnished and installed in conduit or lateral, complete as specified	1500 Ft.	.....	.....	.21	315.00	.35	525.00	.35	525.00	.89	1,335.00
	30	For each foot of 3 No. 6 5,000 V. s/c 1/c cable furnished and installed in conduit or lateral, complete as specified	400 Ft.	.....	.....	.20	80.00	.33	132.00	.35	140.00	1.12	448.00
	31	For each foot of 4 No. 6 5,000 V. s/c 1/c cable furnished and installed in conduit or lateral, complete as specified	400 Ft.	.....	.....	.20	80.00	.32	128.00	.35	140.00	1.43	572.00
	32	For each foot of 1 No. 6 5,000 V. s/c 1/c cable furnished and installed in trench in parkway, complete as specified	2750 Ft.	.....	.....	.37	1,017.50	.50	1,375.00	.58	1,595.00	.58	1,595.00
	33	For each foot of 2 No. 6 5,000 V. s/c 1/c cable furnished and installed in trench in parkway, complete as specified	2000 Ft.	.....	.....	.29	580.00	.40	800.00	.58	1,160.00	1.00	2,000.00
	34	For each foot of 3 No. 6 5,000 V. s/c 1/c cable furnished and installed in trench in parkway, complete as specified	750 Ft.	.....	.....	.26	195.00	.38	285.00	.58	435.00	1.42	1,065.00
	35	For each foot of 4 No. 6 5,000 V. s/c 1/c cable furnished and installed in trench in parkway, complete as specified	1000 Ft.	.....	.....	.25	250.00	.36	360.00	.58	580.00	1.82	1,820.00
	36	For each foot of 5 No. 6 5,000 V. s/c 1/c cable furnished and installed in trench in parkway, complete as specified	1000 Ft.	.....	.....	.24	240.00	.35	350.00	.58	580.00	2.22	2,220.00
	37	For each foot of 1 No. 6 5,000 V. s/c armored cable furnished and installed in lateral, complete as specified	250 Ft.	.....	.....	.42	105.00	.55	137.50	.54	135.00	.53	132.50
	38	For each foot of 2 No. 6 5,000 V. s/c armored cable furnished and installed in laterals, complete as specified	200 Ft.	.....	.....	.40	80.00	.50	100.00	.54	108.00	1.05	210.00
	39	For each foot of 3 No. 6 5,000 V. s/c armored cable furnished and installed in laterals, complete as specified	75 Ft.	.....	.....	.40	30.00	.46	34.50	.54	40.50	1.55	176.25
	40	For each foot of 4 No. 6 5,000 V. s/c armored cable furnished and installed in laterals, complete as specified	100 Ft.	.....	.....	.40	40.00	.45	45.00	.54	54.00	2.05	200.50
	41	For furnishing all material and making splice on No. 6 5,000 V. s/c lead covered cable, complete as specified	45	.....	.....	6.40	288.00	10.00	450.00	11.00	495.00	6.00	270.00
	42	For furnishing all material and making splice on No. 6 5,000 V. s/c armored cable, complete as specified	20	.....	.....	6.90	138.00	10.00	200.00	11.00	220.00	8.50	170.00
	43	For s/c standard pothead furnished, installed and connected, complete as specified	20	.....	.....	10.90	218.00	20.00	400.00	18.00	360.00	11.50	230.00
	44	For each s c pole top pothead furnished, installed and connected, complete as specified	50	.....	.....	12.80	640.00	25.00	1,250.00	20.00	1,000.00	15.00	750.00
	45	For each 2 c pole top pothead furnished, installed and connected, complete as specified	20	.....	.....	24.00	480.00	30.00	600.00	38.00	760.00	25.00	500.00
	46	For each 3 c pole top pothead furnished, installed and connected, complete as specified	10	.....	.....	31.00	310.00	34.00	340.00	49.00	490.00	32.00	320.00
	47	For each 4 c pole top pothead furnished, installed and connected, complete as specified	5	.....	.....	36.00	180.00	36.00	180.00	60.00	300.00	36.75	183.75
	48	For each 30' 0" steel pole set in 12" concrete envelope and furnished with necessary equipment, complete as specified	30	.....	.....	18.00	540.00	20.00	600.00	17.50	525.00	18.00	540.00
	49	For each 30' 0" wood pole set in 12" concrete envelope and furnished with necessary equipment, complete as specified	2	.....	.....	14.00	28.00	25.00	50.00	17.50	35.00	12.00	24.00
	50	For each present steel pole removed and delivered to the City of Chicago	20	.....	.....	10.00	200.00	8.00	160.00	12.00	240.00	10.00	200.00
	51	For each present wood pole removed and delivered to the City of Chicago	20	.....	.....	10.00	200.00	8.00	160.00	12.00	240.00	8.00	160.00
	52	For each 2-pin malleable iron cross arm furnished complete with wood pins and insulators, as specified	30	.....	.....	3.40	102.00	4.00	120.00	7.00	210.00	5.50	165.00
	53	For each 4-pin malleable iron cross arm furnished complete with wood pins and insulators, as specified	15	.....	.....	5.50	82.50	6.00	90.00	10.00	150.00	8.00	120.00
	54	For each 6-pin malleable iron cross arm furnished complete with wood pins and insulators, as specified	3	.....	.....	10.00	30.00	8.00	24.00	16.00	48.00	15.00	45.00
	55	For each 2-pin wood cross arm furnished complete with wood pins and insulators, as specified	20	.....	.....	1.60	32.00	2.50	50.00	6.00	120.00	2.00	40.00
	56	For each 4-pin wood cross arm furnished complete with wood pins and insulators, as specified	10	.....	.....	2.00	20.00	2.75	27.50	8.00	80.00	2.50	25.00
	57	For each 6-pin wood cross arm furnished complete with wood pins and insulators, as specified	3	.....	.....	2.75	8.25	3.50	10.50	12.00	36.00	3.75	11.25
	58	For each iron insulator pin furnished and installed, as specified	100	.....	.....	.90	90.00	1.00	100.00	1.00	100.00	1.60	160.00
	59	For each 40' 0" guy furnished and installed, complete as specified	100	.....	.....	5.00	500.00	5.00	500.00	10.00	1,000.00	6.00	600.00
	60	For each additional 5' 0" of guy wire in excess of 40' 0" for each guy furnished and installed, complete as specified	200 Ft.	.....	.....	.25	50.00	.90	180.00	1.00	200.00	.25	50.00
	61	For furnishing and installing each 4"x 3' 0" pole extension, including pole collars, adapters and acorn tops, complete as specified	20	.....	.....	17.85	357.00	12.00	240.00	32.00	640.00	20.00	400.00
	62	For furnishing and installing each 4"x 5' 0" pole extension, including pole collars, adapters and acorn tops, complete as specified	20	.....	.....	21.25	425.00	14.00	280.00	37.00	740.00	24.00	480.00
	63	For each single malleable iron pole step and bands furnished and installed, complete as specified	1000	.....	.....	.98	980.00	.65	650.00	1.35	1,350.00	1.40	1,400.00
	64	For each double malleable iron pole step and band furnished and installed, complete as specified	200	.....	.....	1.32	264.00	.75	150.00	1.55	310.00	1.85	370.00
	65	For each foot of 1 No. 6 W. P. aerial wire furnished and installed and tieing, same in on insulators, complete as specified	1500 Ft.	.....	.....	.05	75.00	.15	225.00	.26	390.00	.07	105.00
	66	For each foot of 2 No. 6 W. P. aerial wire furnished and installed and tieing same in on insulators, complete as specified	1000 Ft.	.....	.....	.05	50.00	.15	150.00	.26	260.00	.13	130.00
	67	For each foot of No. 6 aerial wire removed and delivered to the City of Chicago	15,000	.....	.....	.01	150.00	.02	300.00	.05	750.00	.03	450.00
	68	For each fixture removed from the subway structures and delivered to the City of Chicago	750	.....	.....	1.25	937.50	2.00	1,500.00	.50	375.00	.75	562.50
	69	For each cross arm removed and delivered to the City of Chicago	100	.....	.....	.25	25.00	1.00	100.00	1.00	100.00	.75	75.00
	70	For each hour of additional labor of foreman of linemen	.....	.....	.....	1.40	.....	2.00	.....	1.60	.....	1.75	.....
	71	For each hour of additional labor of each lineman	.....	.....	.....	1.25	.....	1.50	.....	1.40	.....	1.50	.....
	72	For each hour of additional labor of each groundman or lineman's helper	.....	.....	.....	1.00	.....	1.25	.....	1.25	.....	1.00	.....
	73	For each hour of additional charge for truck or team, including driver	.....	.....	.....	1.60	.....	3.50	.....	2.25	.....	3.50	.....
		TOTAL FOR DIVISION A				$35,907.29		$40,719.50		$43,870.77		$57,960.10	
Division B	1	For each tubular steel pole and the equipment thereon painted, complete as specified	40,000	$ 1.85	$ 74,000.00	$ 1.45	$ 58,000.00	$ 1.90	$ 76,000.00	$ 2.24	$ 89,600.00	$ 2.00	$ 80,000.00
	1	For each cast iron lamp post painted, complete as specified	5,000	.30	1,500.00	.50	2,500.00	.43	2,150.00	.52	2,600.00	.90	4,500.00
		TOTAL FOR DIVISION B	.....	.....	$ 75,500.00		$60,500.00		$78,150.00		$92,200.00		$84,500.00
		TOTAL FOR DIVISION A AND B	.....	.....			$96,407.29		$118,869.50		$136,070.77		$142,460.10

Names and Addresses of Bidders and Prices Quoted.

The Clerk presented his report of the receipt and deposit of moneys for the month of June, which was ordered published and filed, as follows:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of three hundred ninety-one thousand eight hundred eighty-seven and forty-six hundredths ($391,887.46) dollars during the month of June, 1919, from the following sources:

Harry R. Gibbons, County Collector, account of 1918 taxes		$300,000.00
Peter A. Anker, Collector, Town of Thornton, account 1918 taxes		6,923.08
South Side Elevated Railroad Company, for semi-annual rental for water privileges at 39th and State streets, from September 1, 1918, to February 28, 1919		4,900.00
Nessen Warehousing Company, in payment of taxes on District property leased by them		1,522.18
United States Crushed Stone Company, in payment of judgment note due June 1, 1919		333.33
Coal Products Manufacturing Company, in payment of 1915, 1916 and 1917 taxes on District property leased by the Western United Gas & Electric Company		284.71
Eastern Metal Refining Company, for sale of scrap material from 39th street and Lawrence avenue pumping stations		124.69
John A. McCormick (Former Treasurer), amount received for interest on bank balance		37.50
Wm. H. Reid & Co., being amount received for return of oil barrels from the 39th street and Lawrence avenue pumping stations and Stock Yards Testing Stations		212.25
Standard Oil Company, amount received for return of ten empty oil barrels from Lawrence avenue pumping station		21.50
Wm. T. Lynch, Record Clerk, being amount received from sundry persons for personal telephone calls		4.15
The Albert Dickinson Company—		
For semi-annual rental for tracts 8, 9 and 10 along Main Channel from October 1, 1918, to April 1, 1919	$ 1,150.00	
For semi-annual rental for tracts 8, 9 and 10 along Main Channel, from April 1, 1919, to October 1, 1919	1,150.00	
		2,300.00
The Ketler-Elliott Erection Company, for rental of lots 7, 9 and 11 along Main Channel for period from June 1, 1919, to November 3, 1919		1,645.87
Peter Molenaar—		
For rental of 41 acres (lots 157 to 158) along Main Channel, from January 1, 1919, to June 30, 1919	$ 248.73	
For rental of 12 acres (part of lot 153) under survey October 15, 1916	30.00	
	$ 278.73	
Taxes on above land for year 1918	109.64	
		388.37

Frank F. Lukas, for annual rental from July 1, 1919, to June 30, 1920, for tracts 167, 169, 171, 175, 178, 181 and 183, and ten acres of lot 186 (lease pending approval of the Board of Trustees)..... 150.00

Daniel Sullivan, for annual rental for 150 acres of pasture land in Lockport Township, lease dated January 1, 1919, pending approval of Board of Trustees..... 125.00

Van Fleet Shops, being rental for month of October, 1918, for premises located at No. 1 Jefferson street, Joliet, Ill..... 75.00

J. A. Budlong, being amount received for spoil removed on the North Shore Channel between Argyle and Lawrence avenues..... 28.70

Jacob Koler, being annual rental for year 1919 for 20 acres of grazing land between the Main Channel and the Desplaines River under permit granted by Manager of the Real Estate Department upon authority of the Real Estate Committee..... 25.00

Joseph Brodansky, being annual rental for year 1919 of tract 139, lying between Main Channel and Illinois & Michigan Canal, permit was granted by Manager of the Real Estate Department upon authority of Real Estate Committee..... 20.00

Sundry consumers for electric power and light.....		$ 60,987.51
South Park Commissioners, for power and light for month of May, 1919.....		2,344.47
State of Illinois, for power and light for months of February, March and April, 1919.....		1,957.32
West Chicago Park Commissioners—		
For power and light for month of April, 1919..	$1,158.69	
For interest and depreciation for month of April, 1919	112.14	
		1,270.83
Commissioners of Lincoln Park—		
For power and light for month of April, 1919..	$1,106.08	
For interest and depreciation for month of April, 1919	69.45	
		1,175.53
Village of Dolton—		
For power and light for month of April, 1919..	$ 634.55	
For interest and depreciation for month of April, 1919	18.65	
		653.20
Village of Melrose Park—		
For power and light for month of April, 1919..	$ 508.16	
For interest and depreciation for months of March and April, 1919.....	118.92	
		627.08
Village of South Holland—		
For power and light for months of April and May, 1919	$ 528.48	
For interest and depreciation for months of April and May, 1919.....	43.38	
		571.86

Village of Maywood—		
For power and light for month of May, 1919	$ 526.71	
For interest and depreciation for month of May, 1919	44.65	
		571.36
City of Berwyn—		
For power and light for months of March, April and May, 1919	$ 460.27	
For interest and depreciation for months of March, April and May, 1919	45.00	
		505.27
Town of Cicero, for power and light for month of April, 1919		499.80
Village of Summit—		
For power and light for month of April, 1919	$ 376.07	
For interest and depreciation for month of April, 1919	32.98	
		409.05
Village of Evergreen Park—		
For power and light for month of May, 1919	$ 190.19	
For interest and depreciation for month of May, 1919	26.87	
		217.06
City of Blue Island—		
For power and light for month of April, 1919	$ 73.13	
For interest and depreciation for month of April, 1919	90.78	
		163.91
Village of Wilmette, for power and light for month of April, 1919		126.90
Village of Lyons—		
For power and light for month of April, 1919	$ 33.95	
On account for power and light	26.69	
		60.64
Blue Island Public Schools, for power and light for month of April, 1919		13.27
Village of Stickney, for power and light for month of May, 1919		7.59
Blue Island Public Library, for power and light for month of April, 1919		3.79
Village of Forest Park, redeposit of Warrant No. 79982, payable to the Village of Forest Park		144.00
Sundry power consumers, rental of meters for June, 1919		139.00
Village of South Holland, to cover cost of overhauling and connecting Westinghouse arrestors at South Holland		137.67
Eastern Metal Refining Company, for sale of scrap material		61.62
Union Petroleum Company, for sale of 250 gallons transfer oil		15.00

Standard Oil Company, for deposit of Warrant No. 100,918..	2.40	
Grasselli Chemical Company, for sale of 20 empty carboys..	100.00	
		72,766.13
		$391,887.46

Yours very truly,

L. F. KING,
Clerk of the District.

CHICAGO, July 17, 1919.

Received from L. F. King, Clerk, the sum of three hundred ninety one thousand eight hundred eighty-seven and forty-six hundredths ($391,887.46) dollars, on the dates and in the amounts as follows:

June 3		$ 217.35
June 4		1,801.74
June 5		475.66
June 6		2,522.06
June 7		1,193.48
June 9		100.00
June 10		72.01
June 12		1,090 90
June 13		5,721.24
June 16		9,456.75
June 17		10,011.33
June 18		4,341.60
June 19		9,794.83
June 20	$ 21,892.11	
June 20	300,000.00	
		321,892.11
June 21		7,461.91
June 23		1,657.82
June 24		1,319.88
June 25		245.86
June 26		5,058.51
June 27		846.35
June 28		544.53
June 30	$ 3,769.32	
June 30	2,292.22	
		6,061.54
Total		$391,887.46

to be deposited to the credit of The Sanitary District of Chicago and to the following accounts:

County Collector	$300,000.00
Electrical Department Working Capital	72,766.13
Collector, Town of Thornton	6,923.08
Water Service	4,900.00
Land Revenue	4,648.30
Taxes on District Property	1,916.53
Pumping Stations, Maintenance and Operation	357.69
Bills Receivable (United States Crushed Stone Co.)	333.33
Interest on Deposits (John McCormick, Former Treasurer)	37.50
Miscellaneous Engineering Operating Expense	4.15
Sanitary Improvements, Sewage and Special Investigation and Experiments, Maintenance and Operation	.75
Total	$391,887.46

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The Clerk presented the following report, which was ordered published and filed, as follows:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—The judgments against the City of Chicago and in favor of The Sanitary District of Chicago for the payment of which bonds of the City of Chicago were to be taken by the Sanitary District were as follows:

Judgment entered December 27, 1916, for	$ 920,882.85
Judgment entered June 20, 1917, for	142,048.17
Judgment entered February 7, 1918, for	1,896,003.51
Judgment entered December 17, 1918, for	2,071,088.41

These judgments include an additional amount of $29.25 court costs.

The total amount of the principal of said judgments, with interest thereon at 5 per cent per annum from the date of entry of said judgments, respectively, to July 1, 1919, plus said court costs amounting to the sum of $29.25, is $5,348,056.99.

Pursuant to the orders of the Board of Trustees heretofore passed, and the authority therein given, the undersigned Clerk of the Sanitary District, in company with Trustee James H. Lawley, Chairman of the Committee on Finance, former Clerk John McGillen and the Attorney for the Board visited the office of the City Comptroller of Chicago on July 15, 1919, and there signed and executed the necessary papers and documents involved in the transaction with the city in regard to said judgments and the payment thereof, and the undersigned Clerk received from said City Controller of Chicago bonds of said City of Chicago of the face value of $3,000,000, also an interim certificate for bonds of said City of Chicago of the face value of $2,347,000, and checks for the additional sum of $1,056.99, making a total of $5,348,056.99, the amount of said judgments, interest and costs as aforesaid, and the Chairman of the Committee on Finance and the Attorney then and there executed and delivered written satisfaction of said judgments.

Said bonds of the City of Chicago of the face value of $3,000,000, were on said day immediately taken by the undersigned Clerk and delivered to the Northern Trust Company for it, and the Illinois Trust & Savings Bank, William R. Compton Company and the Bankers' Trust Company of New York, the joint purchasers of said bonds, said banks having submitted the highest and best bid therefor, said bid being for the sum of $2,837,155, and having been accepted by the Board of Trustees at its meeting on Monday, July 14, 1919, and checks for the aggregate sum of $2,842,155.10, being the amount of their purchase price, plus accrued interest on said bonds earned for the first fifteen days of the current month of July amounting to $5,000.10, were then and there delivered by said Northern Trust Company to the undersigned Clerk, who at once deposited said checks with the Treasurer of The Sanitary District of Chicago.

Said interim certificate for bonds of the City of Chicago of the face value of $2,347,000 was on the same day deposited with the Treasurer of the Sanitary District and is now in his possession.

The assistance of retiring Clerk, Mr. John McGillen, in the matter of securing the widest possible publicity with reference to the proposed sale of said bonds of the City of Chicago by the Sanitary District which resulted in securing the bids received, is very much appreciated.

It is a pleasure to report that Hon. Geo. F. Harding, Comptroller of the City of Chicago, expressed himself to the representatives aforesaid as being much gratified over the bid prices received

by the Sanitary District for the aforesaid bonds of the city, and that George M. Reynolds, Treasurer of the Sanitary District, stated to the representatives of the District that the Board of Trustees are to be congratulated upon their success in securing the price for said bonds which they obtained.

Attached hereto is the receipt of the Northern Trust Company on behalf of it and its associate bidders aforesaid for said bonds of the City of Chicago of the face value of $3,000,000, which said receipt is made a part of this report.

Respectfully submitted,

L. F. KING,
Clerk of The Sanitary District of Chicago.

The Clerk presented the report of the Chief Engineer for the month of February, 1919, which was ordered published and filed, as follows:

CHICAGO, March 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of February, 1919, giving the detailed operations of the same.

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed no material from the spoil banks of this channel during the month.

Sloping Banks.

Byrne Brothers Dredging & Engineering Company, contractors, carried on no work during the month.

CALUMET-SAG CHANNEL.

Section No. 1.

James O. Heyworth, contractor, continued operations throughout the month. Dragline No. 2 was engaged in hoisting and backfilling turning basin at station 6+80 from the 3d to the 6th and between stations 6+50 and 6+80 from the 6th to the 9th. Locomotive crane No. 1 was engaged in cleaning up channel between stations 5+50 and 9+00 from the 26th to the 28th. Blasting was carried on at station 5+00 on the 27th and 28th, removing high spot. All of the aforementioned work was carried on in one 10-hour shift per day. Pumping channel was carried on at station 28+00 from the 1st to the 28th, working two 12-hour shifts per day. One man was engaged in making inspection of outfalls from Sections 1 to 10 on the 1st. One man engaged in watching dam at Archer road on the 1st. One man was engaged in cleaning out holes for blasting on the 7th. Thirty men were engaged in cleaning up the channel on the 17th, and 43 men on the 18th. An average daily force of 42.4 men was employed. At the end of the month 97.4 per cent of the total estimated value of the contract was completed.

Section 13.

A. Guthrie & Co., contractors, closed down all work for the winter on December 21, 1918, and continued pumping channel as follows: At station 782+00 from the 4th to the 7th, 11th to 21st, and 24th to 28th, working one 5-hour shift per day and at station 749+00 from the 3d to the 5th, 10th to 16th, 20th to 23d, 27th and 28th, working one 7-hour shift per day. An average daily force of 2.2 men was employed. At the end of the month 58.4 per cent of the total estimated value of the contract was completed.

The B. & O. Railway Company employed a force of 2 men in drilling holes in plates for interlocking system from the 1st to the 28th, working one 8-hour shift per day. A force of 6 men was engaged in gauging tracks on the P. S. spur track on the 10th, working one 8-hour shift. A force of 6 men in unloading and spreading cinders and grading tracks along north and south approaches to Stony Creek trestle, working one 8-hour shift per day.

The Grand Trunk Western Railway

Company employed a force of 10 men raising telegraph wires on the G. T. W. Right of Way, Broadway to Vermont streets, from the 1st to the 3d, working one 8-hour shift per day.

The C. R. I. & P. Ry. Co. employed an average daily force of 14 men, erecting pile driver on the 24th, driving piles for temporary approach trestle to R. I. bridge from the 25th to the 27th, unloading ties and material for trestle on the 28th, working one 8-hour shift per day.

Section 14.

A. Guthrie & Co., contractors, closed down their plant for the winter on December 21, 1918, and continued pumping channel at station 837+00 throughout the month, working an average of six hours daily.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 6.

Byrne Brothers Dredging & Engineering Company, contractors, carried on a small amount of work throughout the month, consisting of maintenance and repairs on the plant. An average daily force of 3.5 men was employed throughout the month.

Evanston Intercepting Sewer.

Nash-Dowdle Company, contractors, continued operations throughout the month. The work consisting of cleaning the sewer constructed in tunnel in Elmwood avenue and Custer avenue, which work was suspended on the 25th. The construction of manholes and sewer connections at various locations was carried on throughout the month. An average daily force of 32 men was employed. At the end of the month 99.2 per cent of the work was completed.

Temporary Pumping Plant.

Nash-Dowdle Company continued pumping throughout the month. An average daily force of 3 men was employed.

Desplaines River Intercepting Sewer.

Nash Brothers, contractors, continued operations throughout the month. The work consisting of construction of main line sewer in tunnel on First avenue north of 12th street. An average daily force of 64 men was employed.

PUMPING STATIONS.

Calumet Sewage Pumping Station.

T. J. Forschner Contracting Company, contractor, continued operations throughout the month. The work consisted of building floor and wall forms and other miscellaneous items. An average daily force of 25 men was employed.

Evanston Sewage Pumping Station.

Nash-Dowdle Company, contractors, commenced work on the 21st. Excavating was carried on through the balance of the month. An average daily force of 8 men was employed from the 21st to the 28th.

Stock Yards Testing Station.

The Sanitary District Organization employed a force of three men, throughout the month, dismantling this station preparatory to moving same to the North Branch of the Chicago River, where it is to be used for testing tannery wastes.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Controlling Works.

The bear trap dam was shut down the entire month. The sluice gates were closed the entire month.

MAIN CHANNEL EXTENSION.

Bridges.

The Sanitary District Organization employed a force of men on rebuilding and painting the fence along the south side of 16th street, Lockport, between Deep Run and the Main Channel. Repairs were made to the floor, indicator machinery and machinery houses of the

9th street bridge and repairs were made to the machinery houses of the 16th street bridge.

Butterfly Dam.

This dam was operated on the 2d, 9th, 16th and 23d. The heater was repaired on the 5th.

Dams at the Power House.

The 48-foot and 12-foot dams were closed the entire month.

The gauges at the dam house were cleaned and repaired on the 6th and 7th. Samples of canal water were taken every eight hours for the Sanitary Division. Three men were on duty working shifts of eight hours each.

I. & M. Canal Lock at the Power House.

No boats passed through the lock during the month. No one was on duty at this lock during the month. The heater was repaired on the 6th.

DESPLAINES RIVER IMPROVEMENT.

BRIDGES.

Sixteenth Street Bridge.

The Sanitary District Organization made repairs to the floor of this bridge. The work was begun on the 3d and completed on the 7th.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated, pumping sewage throughout the month. The pumps were operated as follows:

Sewer Pump No. 1 was operated some part of six days, or a total of 60 hours and 55 minutes. Pump No. 2 some part of 15 days, or a total of 251 hours and 50 minutes. Pump No. 3 some part of 5 days, or a total of 13 hours and 25 minutes. Pump No. 4 some part of 16 days, or a total of 374 hours. The four pumps were operated for a grand average of 6 hours and 15 minutes for each day of the month, and pumped an average of 8,927 cubic feet of sewage for each minute of the month. Fresh water pumps Nos. 5 and 6 were shut down the entire month.

The blow-off valves on boilers Nos. 7 and 8 were changed. Repairs were made to the ash conveyor, the house pump and to the coal elevator, the latter on account of a break on the 28th.

Lawrence Avenue Pumping Station.

This station was operated, pumping sewage throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of five days, or a total of 12 hours and 5 minutes. Pump No. 2 some part of 15 days, or a total of 264 hours and 10 minutes. Pump No. 3 some part of 21 days, or a total of 409 hours and 5 minutes. The three pumps were operated for a grand average of 8 hours and 10 minutes for each day of the month, and pumped an average of 3,692 cubic feet of sewage for each minute of the month. The fresh water pump No. 4 was shut down the entire month.

Boiler No. 1 was thoroughly overhauled between the 17th and 21st. A hydrostatic pressure of 140 pounds was applied on the 21st to test same. Work was begun on the 24th on replacing the arch of boiler No. 1. The overhauling of sewage pumping unit No. 1 was begun on the 17th, but was not completed at the end of the month. Minor repairs were made to pumping engine No. 3. A heavy rain on the 28th taxed the cacapacity of the station, one pump and one boiler being out of service at the time.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The pumps were operated as follows"

Pump No. 1 was operated some part of 27 days, or a total of 427 hours and 30 minutes. Pump No. 2 some part of one day, or a total of 11 hours and 10 minutes. Pump No. 3 some part of 25 days, or a total of 349 hours and 57 minutes. Pump No. 4 some part of 27

days, or a total of 435 hours and 21 minutes. The four pumps were operated for a grand average of 10 hours and 56 minutes for each day of the month, and pumped an average of 14,415 cubic feet of fresh water for each minute of the month.

Miscellaneous Equipment.

The Sanitary District Organization employed a force of three men removing the "cement gun" plant from scow No. 2 at 31st and Western avenue, preparatory to repairing the scow. The plant was all removed at the end of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimendation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on the samples sent from Lockport.

Sewer and Rain Gauges.

Rain gauges were operated at the 39th Street Pumping Station, Stock Yards Testing Station, Lockport, Kensington and at 31st street and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Drafting Division.

The following work was carried on during the month: Tracing contract drawings of the Des Plaines River Sewage Treatment Plant. Preparing roster for Board room. The reducing of Stockyards map was continued. Revising index. Preparing Tax Exemption maps for filing with Cook County Assessor. Indexing committee reports. Work on the Calumet Sag Atlas and Chicago River Atlas was continued. Computing co-ordinates for North Branch Survey. Copying records at the County Building for Chicago River Atlas. Filing warehouse index cards. Preparing lease map for lots 22 to 24, Main Channel. Checking Cook County tax exemption lists. Preparing plat for ordinance section 1, Calumet sewer. Plotting hubs on index map of North Branch Survey. Preparing drawings for gauging weirs for sewer outlets along North Branch. Posting M. C. Lease map to date. Writing index cards.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Des Plaines River treatment work was continued. The preparation of supplementary plans for the Calumet pumping station was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed rearrangement of the 95th Street Pumping Station.

The preparation of plans for the intercepting sewer in South Chicago was continued. The preparation of plans of the storm overflow to the Calumet River at Wildwood was continued. Studies were continued on an auxiliary generator station at the Calumet Pumping Station, to be run by oil engines. Conferences were held with various parties from the Calumet region in Indiana over

proposed schemes for sewage diversion and treatment. An inspection was made of the sewage treatment works at Atlanta, Ga.

Hydraulic Measurement Division.

The self-recording gauges at the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records from the gauges were worked up in the office.

Bridge Division.

Work was continued on the details of the reinforced concrete work for the Calumet Sewage Pumping Station and structural steel work for the Des Plaines River Sewage Pumping Station. Details of the structural steel work for the Evanston Sewage Pumping Station were begun. On February 13th the Committee on Engineering recommended the construction of a bascule bridge across the Main Channel at California avenue. Considerable time was spent during the month in making comparative estimates of the cost of different types of bascule bridges.

Field Parties.

Party was employed on Chicago River dredging and docking, rerunning base lines. North Shore Channel sloping office and field work, gauge setting. Survey of the North Branch of the Chicago River on account of sewage disposal plant. Main Channel section "O" survey of lot 4 east of Western avenue. General office work at Canal street office. Sewer department on account of weir construction.

The Calumet-Sag field parties performed the usual routine construction duties as follows: The Sag Division on Section 1, the Blue Island Division on Sections 13 and 14.

The general engineering force and other employes continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections. Keeping the accounts of the department, preparing vouchers, furnishing information for other departments and performing other necessary duties, etc.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, in accordance with Rule 46 of the Rules and Regulations of the Board, herewith presents weekly reports made to your Committee by the Clerk of all purchases made by him for and on account of The Sanitary District of Chicago from March 31 to May 31, 1919, inclusive.

Your Committee further reports that it has examined said reports, found them to be correct, has approved same and recommends that they be accepted and placed on file.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Lawley, Littler, Mueller, Nance and Paullin—Five.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the Board on June 5, 1919 (page 709 of the Proceedings), awarded a contract to the Hall Truck Sales Co., the agents of the Lewis Hall Iron Works, for furnishing a five-ton auto truck to the Sanitary District for the sum of $4,750; that since said award was made, said Lewis Hall Iron Works has notified the District it would not execute a contract for furnishing said auto truck, alleging as the reason therefor that the employes of the Timken Roller Bearing Company, on which it depended to furnish various parts of said auo truck, were on a strike and said parts could not be obtained.

Your Committee is, therefore, of the opinion that said order of June 5, 1919 (page 709 of the Proceedings) awarding said contract to the Hall Truck Sales Co., the agent of the Lewis Hall Iron Works, should be repealed.

Your Committee further reports that it has again considered the bids for furnishing said auto truck which were referred to your Committee at the meeting of May 8, 1919 (page 469 of the Proceedings), together with report submitted by the Electrical Engineer, and is of the opinion that all bids for furnishing said auto truck should be rejected.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the order of the Board adopted June 5, 1919 (page 709 of the Proceedings), awarding a contract to the Hall Truck Sales Co., the agent of the Lewis Hall Iron Works, for furnishing a five-ton auto truck to the Sanitary District, be, and the same is hereby repealed; and it is further

Ordered, That all bids received for furnishing said five-ton auto truck to the Sanitary District, be, and the same are hereby rejected; and it is further

Ordered, That the checks of the respective bidders for furnishing said auto truck be returned to said bidders; and it is further

Ordered, That the Clerk re-advertise for bids for furnishing said five-ton auto truck.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board a grant of easement from Bessie C. Johnson and Wendell H. Johnson, her husband, whereby said grantors, for the consideration of $25.00, grant to the Sanitary District a perpetual easement to construct, reconstruct, maintain and operate an intercepting sewer and appurtenances thereto in the Desplaines River District, in, under and through certain real estate owned by them. Said easement is in the usual form in use by the Sanitary District in such cases.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief

Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the said form of easement which is hereto attached, the same having been duly executed by the grantors above named, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to draw a warrant in the sum of $25.00, payable to the order of Bessie C. Johnson and Wendell H. Johnson and deliver the same to them in full payment of the consideration for said grant.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the Village of Maywood on June 12, 1919, passed an ordinance granting the Sanitary District the right, permission and authority to enter upon, use and occupy North Second avenue from the North limits of said Village to North Eighth street, also North Eighth street from Second avenue to First avenue and First avenue from North Eighth street to the Southern limits of the Village of Maywood for the purpose of constructing, reconstructing, repairing, maintaining and operating an intercepting sewer, adjunct and addition to its Main Channel.

Your Committee further reports that it has carefully examined said ordinance which has been approved by the Chief Engineer and Attorney and is of the opinion that the rights of the Sanitary District are properly safeguarded therein and said ordinance should be accepted by the Board, and therefore recommends the passage of the following order:

Ordered, That the ordinance of the Village of Maywood above specified, which is herewith transmitted to the Board, be and the same is hereby approved and accepted by The Sanitary District of Chicago, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to file with the Clerk of the said Village of Maywood such documents as may be necessary to make such acceptance effective, and it is further

Ordered, That the form of said ordinance be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy,

Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

The following is the ordinance passed by the Board of Trustees of the Village of Maywood:

AN ORDINANCE

Concerning the Right of the Sanitary District of Chicago to Construct, Reconstruct, Maintain and Operate a Certain Intercepting Sewer, Adjunct and Addition to Its Main Channel Within the Village of Maywood.

Be It Ordained by the President and the Board of Trustees of the Village of Maywood:

SECTION 1. The Village of Maywood hereby gives and grants to The Sanitary District of Chicago the perpetual right, permission and authority to enter upon, use and occupy North Second avenue from the North limits of said Village to North Eighth street, also North Eighth street from Second avenue to First avenue and First avenue from North Eighth street to the Southern limits of the Village of Maywood for the purpose of constructing, reconstructing, repairing, maintaining and operating an intercepting sewer, adjunct and addition to its Main Channel. The location, size and manner of construction of said intercepting sewer, adjunct and addition shall be in accordance with such plans and specifications as may adopted by The Sanitary District of Chicago, and

SEC. 2. That whenever or wherever said The Sanitary District of Chicago shall in the construction or reconstruction of said intercepting sewer, adjunct and addition to its Main Channel, intersect or cut, or cause to be intersected or cut any sewers, sewerage pipes, or other pipes or structures through which sewage or drainage may flow, said The Sanitary District of Chicago shall at its sole cost and expense restore said sewers, sewerage pipes or other pipes and structures to their former condition of usefulness or connect the same directly with said intercepting sewer in a manner to be approved by the Chief Engineer of The Sanitary District of Chicago.

SEC. 3. That The Sanitary District of Chicago shall at its own expense make or cause to be made such changes in the location of the water mains and water pipes, police and fire alarm electrical wires and other property and utilities of said Village of Maywood as may be rendered necessary by the construction or reconstruction of said intercepting sewer, adjunct and addition: All such changes shall be made at the places and in the manner designated by the Chief Engineer of The Sanitary District of Chicago; provided that such water main and water pipes, police and fire alarm electrical wires and other property and utilities of said Village of Maywood so changed by The Sanitary District of Chicago in the said construction and reconstruction shall be so restored or placed that they and each of them will perform a service equal to that which they and each of them did perform before they were thus changed by The Sanitary District of Chicago and provided, further, that no liability shall be imposed on the Sanitary District for temporarily interfering with the service of such water mains, water pipes, police and fire alarm electrical wires and other property and utilities of said Village of Maywood.

SEC. 4. The said intercepting sewer, adjunct and addition of The Sanitary District of Chicago, to the said Main Channel to be constructed as provided in this ordinance, shall be constructed, maintained and operated solely by The Sanitary District of Chicago, and the said Village of Maywood shall not be held responsible in any manner for the manner of construction, reconstruction, maintenance or operation for the same; and said The Sanitary District of Chicago shall indemnify and hold harmless the Village of Maywood from any and all claims or damages to real or personal property by reason of the loca-

tion, construction or manner of construction, reconstruction, maintenance or operation of said intercepting sewer, adjunct and addition within the corporate limits of said Village of Maywood.

SEC. 5. That the said intercepting sewer, adjunct and addition to the main channel of The Sanitary District of Chicago shall be constructed, reconstructed, maintained and operated by said The Sanitary District of Chicago at its sole cost and expense.

SEC. 6. That The Sanitary District of Chicago shall restore as soon as practicable to their former state of usefulness, all streets and alleys and all pavements, walks, cross-walks, curbs and other public property upon, under and through which said intercepting sewer, adjunct and appurtenances are constructed and which are damaged thereby, within the corporate limits of said Village of Maywood; except that The Sanitary District of Chicago shall not be held liable for such ordinary wear and tear as may be sustained by hauling material, surplus excavation or equipment in motor trucks, horse drawn wagons or trucks, or other vehicles. All surplus excavation and other spoil shall be removed from the site of the work by The Sanitary District of Chicago as soon as practicable, said Village of Maywood hereby agreeing to permit any surplus soil occasioned by said work to be carried through the streets and alleys within said Village of Maywood, and to be deposited within the corporate limits of said Village at such places as may be agreed upon. The public use of the public property within the said Village of Maywood above specified shall not be unnecessarily interrupted or interfered with.

SEC. 7. That insofar as is practicable, said The Sanitary District of Chicago shall construct and maintain temporary bridges or temporary diversions for both street and foot traffic until the pavement, walks and cross-walks removed or disturbed by reason of said work of excavation shall be restored to their former condition of usefulness.

SEC. 8. The said Village of Maywood does hereby order and direct and shall by ordinance require all persons, partnerships or corporations who shall at the time of the construction or reconstruction of said intercepting sewer, adjunct and addition own, operate or maintain any conduits, wires, poles, pipes, gas mains, manholes, cables, steam and street railway tracks and equipment or other structures within any portion of the streets, public alleys and highways to be excavated in the construction, reconstruction, repair, extension or modification of such intercepting sewer, adjunct and addition at his, its or their own expense to make such changes in the location of such conduits, wires, poles, pipes, gas mains, manholes, cables, steam and street railway tracks and equipment or other structures as may be rendered necessary by the construction, reconstruction, repair, extension or modification of said intercepting sewer, adjunct and addition to said main channel.

The Sanitary District is hereby given and granted the right at its sole expense, to take such steps in the name of the Village of Maywood or otherwise as it may deem necessary for the enforcement of this ordinance or any other ordinance of the Village of Maywood necessary to be enforced to accomplish the purposes herein mentioned; and the said The Sanitary District of Chicago shall indemnify and save harmless the said Village of Maywood from any and all damages or claims that are in the nature of a legal liability that may be sustained by it by reason of the passage or enforcement of this ordinance or any other ordinance of said Village relating to the subject matter herein stated.

SEC. 9. The Village of Maywood further agrees that The Sanitary District

of Chicago and its contractors may transport to the site of said work, all materials, plant and equipment used in the construction and reconstruction of said intercepting sewer, adjunct and addition to said main channel together with the pumping stations and appurtenances connected therewith, on and across the streets and alleys of said Village of Maywood by the use of dinkey engines and cars running on temporary tracks laid on the surface of said streets and alleys or by the use of horses and vehicles or by other means of transportation, and may also use in said construction and reconstruction work such steam shovels, hoisting engines and other plant and equipment as may be necessary and may dispose of all surplus soil and debris excavated in the course of said work in the same manner as hereinabove specified for the transportation of material, plant and equipment.

SEC. 10. That the Village of Maywood further agrees that any system of sewers hereafter installed by it for the disposal and care of domestic sewage and drainage shall be so constructed as to connect with the said intercepting sewer, adjunct or addition aforesaid, to be constructed by the Sanitary District of Chicago, and it is further agreed that said Village of Maywood, before passing any further ordinances for the installation, construction, extension or reconstruction, modification or change of any description of any system of sewers to care for the domestic sewage and drainage within said Village, will first submit to the Chief Engineer of said The Sanitary District of Chicago for his approval, all plans and specifications concerning the construction thereof, the rules and regulations providing for the connection therewith and the maintenance thereof.

SEC. 11. In consideration of the passage of this ordinance and the benefits conferred thereby on the Village of Maywood, said Village of Maywood shall and does hereby give, grant and issue without fees or costs therefor to The Sanitary District of Chicago or to any contractor to whom the work, or any part thereof specified in this ordinance shall be awarded, all permits or licenses required for doing said work; and shall furnish at regular current rates to said The Sanitary District of Chicago or to any contractor to whom the work or any part thereof shall be awarded, at any existing water connection or hydrant, all water needed by it or them in the performance of said work to the extent of the reasonable capacity of the Village's water plant to furnish the same in addition to the Village's own reasonable needs.

Further said Village of Maywood agrees that it will employ and furnish at its own expense any and all engineers or inspectors required by the rules and ordinances of said Village or who may be employed by said Village for any purpose in connection with the construction, maintenance, repair or reconstruction of said intercepting sewer, adjunct and appurtenance.

SEC. 12. This ordinance shall be in force and effect from and after its passage and approval and the acceptance of the same by The Sanitary District of Chicago, within ninety (90) days from the date of the passage hereof, which acceptance shall be evidenced by a certified copy of the order, resolution or ordinance of the Board of Trustees of The Sanitary District of Chicago accepting the same, filed with the Clerk of the Village of Maywood.

HENRY W. TOLSTED,
President of the Village of Maywood.

Attest:

HOWARD A. ULRICH,
Village Clerk Pro Tem.

Passed June 12, A. D. 1919.

Approved June 12, A. D. 1919.

Approved as to form:

JAS. M. SLATTERY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that on June 12, 1919 (page 786 of the Proceedings), the Board authorized the Marshal to have a new stem built on the police boat "White Flyer," and to make certain repairs and betterments to said boat, provided the cost of the same should not exceed the sum of $300.00.

Your Committee further reports that it has received a communication from the Marshal in which he states that when said boat was placed in a dry dock, it was discovered that its seams needed caulking, also that the union scale of wages has been raised since the work on said boat was started by reason whereof it will be necessary to expend an additional sum of $125.00 in performing the work on said boat and he requests that he may be authorized to expend said additional sum.

Your Committee having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Marshal be and he is hereby authorized to expand an additional sum of $125.00 in performing the work above specified.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to report that the semi-annual interest on the nineteenth issue of bonds of the Sanitary District, amounting to the sum of Three Thousand Eight Hundred Forty Dollars ($3,840.00) will fall due August 1, 1919, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be and they are hereby authorized to draw a warrant payable to the order of the Treasurer of The Sanitary District of Chicago for the sum of Three Thousand Eight Hundred Forty Dollars ($3,840.00), to pay the semi-annual interest due August 1, 1919, on One Hundred Ninety-two Thousand Dollars ($192,000.00), of the nineteenth issue of bonds at 4 per cent per annum.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received requests from the Chief Engineer, the Clerk, the Manager of the Department of Real Estate and the Marshal to make transfer of funds from various unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which no appropriation has been made and to increase certain appropriations.

Your Committee having considered the matter, is of the opinion that the requests should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make the following transfers in appropriations for the year 1919, in accordance with the several requests of the Heads of the Departments attached hereto.

Department of Engineering.

From Account No. 29-64, repair and replacement service for channels, ditches, reservoirs and docks.....$250.00

To the following accounts:

No. 29-526, repair and replacement service for tools	$ 25.00	
No. 29-5272, repair and replacement service for vehicle equipment not power driven	25.00	
No. 29-533, repair and replacement service for testing equipment	150.00	
No. 364, motor vehicle and motor boat supplies	50.00	
		$250.00

Department of the Clerk of the District.

From Account No. 99, contingencies.....$125.00

To Account No. 854, fidelity insurance..... 125.00

Department of Real Estate.

From Account No. 24, advertising.....$ 5.00

To Account No. 29-53, repair and replacement for furniture and office equipment 5.00

Department of Police.

From Account No. 5273, floating equipment.....$625.00

To the following accounts:

No. 29-5273, repair and replacement service for floating equipment	$605.00	
No. 361, mechanical and plant supplies	15.00	
No. 405, fibre products and insulation materials	5.00	
		$625.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, July 17, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for First Half of July, 1919.

L. F. King, Clerk (general payroll, first half of July)		$ 28,688.29

Construction Account.

A. Guthrie & Co. (labor and material, B. & O. C. T. R. R., Calumet-Sag Channel)	$ 2,775.81	
The Overland Construction Company (erecting C. R. I. & P. Ry. main line bridge, Calumet-Sag Channel)	3,995.00	
Nash-Dowdle Company (temporary pumping service, Evanston)	775.00	
E. A. Hanrahan (labor and material, Tinley Creek outfall)	497.00	
E. A. Hanrahan (labor and material, Tinley Creek outfall)	230.00	
L. F. King, Clerk (expenses of employe)	1.54	
E. A. Hanrahan (labor furnished on Tinley Creek outfall)	498.00	
E. A. Hanrahan (labor furnished on Tinley Creek outfall)	495.00	
Chicago Title & Trust Company (abstract of title)	300.00	
Thornton-Claney Lumber Company (lumber)	262.66	
The Peoples Gas Light & Coke Company (gas service)	.37	
L. F. King, Clerk (expenses of employes)	210.78	
L. F. King, Clerk (expenses of employes)	163.43	
A. Guthrie & Co. (labor and material, extra work on Calumet-Sag Channel)	40.50	
A. Guthrie & Co. (labor and material, Chicago St. bridge)	6.50	
		10,251.59

Maintenance and Operation Account.

L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	$ 153.40	
L. F. King, Clerk (special roll, repairs to boilers, etc.)	55.00	
Buchanan-Daley Company (lumber)	499.20	
Crane Company (pipe fittings)	184.90	
Thornton-Claney Lumber Company (lumber)	173.73	
David G. Murray (teaming)	96.00	
The Wm. H. Reid Company (oil)	90.30	
H. M. Hooker Glass & Paint Company (oil, etc.)	89.83	
Sullivan Oil Company (engine oil)	47.11	
Miller Hardware Company (supplies)	34.28	
Jos. T. Ryerson & Son (steel)	22.82	
Standard Oil Company (kerosene)	17.20	
Britz The Florist (geraniums for Wilmette Pumping Station bed)	9.50	
Old Glory Mfg. Company (U. S. flag)	9.31	
L. Gould & Co. (brooms)	8.33	
Amounts carried forward	$ 1,490.91	$ 38,939.88

Amounts brought forward	$ 1,490.91	$ 38,939.88
Thirty-ninth St. Motor Express (cartage)	6.00	
Stebbins Hardware Company (leather bellows)	1.30	
Weil Bros. (pipe plugs)	.43	
		1,498.64

Illinois and Michigan Canal and Illinois River Conditions Department.

E. H. Heilbron (expenses of employe)	$ 81.36	
Standard Oil Company (gasoline)	23.00	
Peoples Telephone Company (telephone service)	7.75	
Public Service Company of Northern Illinois (electrical energy)	6.88	
		118.99

Law Department.

L. F. King, Clerk (expenses of employe)	$ 16.36	
Enterprise Automobile Repair Company (repairs)	86.25	
F. H. Stephens (professional services rendered)	32.70	
Callaghan & Co. (law books)	26.65	
Riddle & Wunderle Company (supplies)	10.50	
West Publishing Company (subscription)	8.00	
West Publishing Company (subscription)	7.50	
Central Electric Company (Simplex jack, etc.)	2.63	
Callaghan & Co. (Illinois Supreme Court Reports)	1.62	
Barr, McNaughton & Barr (services rendered and expenses incurred re tax matters in Will County)	5,010.05	
Chiperfield & Chiperfield (to retainer and services rendered re overflow damages)	1,500.00	
Chas. G. Sachse (professional services rendered)	52.50	
F. H. Stephens (stenographic services)	7.50	
		6,762.26

Clerical Department.

L. F. King, Clerk (25 ride ticket to Joliet and return)	$ 15.44	
L. F. King, Clerk (25 ride ticket to Joliet and return, paymaster)	15.44	
L. F. King, Clerk (expenses of employe)	6.92	
The Fred J. Ringley Company (printing)	60.00	
The Nelson-Eiseman-Quist Company (carbon paper, etc.)	42.00	
Albert Hancock & Co. (books, index of Proceedings)	14.00	
Burroughs Adding Machine Company (repairs)	4.40	
S. L. Schwarz & Co. (drinking cups)	3.50	
Walden W. Shaw Livery (automobile service)	2.80	
Burr-Vack Company (bands on self inker)	1.00	
Burr-Vack Company (stamp)	.20	
		165.70

Treasury Department.

Sibley Warehouse & Storage Company (storage)	100.00

Real Estate Department.

The Fred J. Ringley Company (printing)	$ 5.00	
F. J. Koch Company (printing)	5.50	
Standard Oil Company (labor and material)	3.36	
		13.86

Police Department.

L. F. King, Clerk (expense, care and cleaning auto)	$ 30.00	
Geo. B. Carpenter & Co. (brass pipe, etc.)	17.24	
Chicago Telephone Company (telephone service)	3.10	
L. F. King, Clerk (expenses of employes)	38.10	
		88.44

Amount carried forward	$ 47,687.77

Amount brought forward		$ 47,687.77
General Account.		
L. F. King, Clerk (expenses of employe)	$ 10.63	
Standard Oil Company (rental of main office)	2,646.04	
Leland Hotel (expenses of Attorneys Hall and Beebe, re legislative matters at Springfield)	74.80	
Parker's Towel Supply Company (towel service)	26.00	
Chicago Telephone Company (telephone service)	15.52	
The Fred J. Ringley Company (printing)	12.00	
Fred Klein Company (electros of signature)	5.75	
20th Century Press Clipping Bureau (clippings)	4.00	
Stebbins Hardware Company (hooks, etc.)	1.75	
Edmund D. Adcock (services rendered re Lake Level Controversy)	669.50	
M. A. Mueller, Trustee (expenses incurred in connection with investigation by Trustees of conditions along Illinois Valley re overflows, etc.)	302.11	
		3,768.10
Electrical Department.		
John McGillen, Clerk (25 rides to Blue Island)	$ 4.29	
L. F. King, Clerk (postage stamps)	60.15	
L. F. King, Clerk (expenses of employe)	16.57	
L. F. King, Clerk (25 rides to Joliet)	15.44	
L. F. King, Clerk (expenses of employe)	6.05	
L. F. King, Clerk (expenses of employe)	2.35	
General Electric Company (cable)	4,617.85	
General Electric Company (cable)	3,578.77	
Western Electric Company (cross arms, etc.)	423.45	
The United States Aluminum Company (cable)	330.41	
Conroy Boiler & Tank Works (cross arm braces)	278.60	
Becker Bros. (assembling and testing motor)	241.35	
The United States Aluminum Company (tie wire)	224.00	
Western Electric Company (rubber gloves, etc.)	212.25	
Wilbur J. Connell (machine bolts, etc.)	127.44	
The Texas Company (oil)	119.07	
Britz The Florist (plants for 31st and Western)	99.00	
Commonwealth Edison Company (cable pins, etc.)	98.68	
Buchanan-Daley Company (lumber)	79.82	
Commonwealth Edison Company (Mazda lamps)	78.68	
National Lead Company (100 lbs. genuine babbitt)	70.52	
Northern Rubber Works (casings repaired)	69.50	
Monarch Electric & Wire Company (coils, etc.)	67.86	
Belden Mfg. Company (wire)	66.26	
Wilbur J. Connell (machine hammers, etc.)	59.50	
Jas. H. Rhodes & Co. (sheeps wool)	54.88	
Motor Mica Products Company (grease)	48.95	
H. Channon Company (large gear, etc.)	48.61	
Famous Sales Company (oil soap)	40.53	
Wilmington Fibre Specialty Company (black fibre tube)	40.41	
The Republic Rubber Company (gray tubes)	39.33	
Mikesell Bros. (friction tape)	33.66	
Schweitzer & Conrad (fuses)	28.04	
Fischer & Hayes Rope Company (manila rope)	27.08	
G. Johnson (teaming)	26.19	
Sullivan Oil Company (oil)	25.42	
S. & L. Motor Company (spindle bodies, etc.)	22.15	
Consumers Company (ice)	21.30	
Western Electric Company (carbon lamps)	20.45	
Wm. Sorgenfrei (rental of Blue Island office)	20.00	
Illinois Testing Laboratories (changing ammeters)	20.00	
Amounts carried forward	$ 11,464.86	$ 51,455.87

Amounts brought forward	$ 11,464.86	$ 51,455.87
Patrick Brennan (personal injuries compensation)	15.00	
Kirk-Barber Company (gear ring)	14.70	
Theo. B. Robertson Products Company (soap powder)	14.20	
Jas. Carmichael (replacing pipe from ejecter sewer)	12.80	
Monarch Electric & Wire Company (wire moulding)	12.25	
Burr-Vack Company (scratch pads, etc.)	11.95	
A. J. Schindler Company (steel gear for starter)	11.20	
Joliet Transfer Company (cartage charges)	11.00	
Geo. B. Carpenter & Co. (block rollers)	10.14	
Overland Motor Company (bolts, etc.)	9.59	
David G. Murray (teaming)	9.50	
DeVoe & Raynolds, Inc. (mechanic stucco, etc.)	7.55	
The Bristol Company (voltmeter charts)	7.49	
Henry Stuckart (piece pearl cloth, etc.)	7.46	
Willard Storage Battery Company (repairing Willard battery)	7.24	
Riddiford Bros. (wire brushes)	6.50	
Shavings & Sawdust Company (sawdust)	6.50	
Chicago Truck Body Company (windshield hinges)	6.00	
Oxweld Acetylene Company (welding gear)	5.75	
H. Channon Company (repairs)	5.15	
United States Crushed Stone Company (telephone charges)	4.90	
Baltimore & Ohio-Chicago Terminal R. R. (demurrage charges)	4.12	
Addressograph Company (plates and cards)	3.48	
American Blue Print Paper Company (blue print paper)	2.84	
City Collector, City of Chicago (inspection charges)	1.50	
United States Fidelity & Guaranty Company (insurance)	1.36	
L. F. King, Clerk (expenses of employes)	594.20	
		12,269.23

Miscellaneous Accounts.

L. F. King, Clerk (expenses of employe)—			
Maintenance and Operation Account	$ 3.47		
Clerical Department	55.40		
General Account	1.28		
Electrical Department	10.44		
		$ 70.59	
L. F. King, Clerk (expenses of employe)—			
Construction Account	$ .61		
Maintenance and Operation Account	7.50		
		8.11	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 117.94		
Maintenance and Operation Account	19.73		
Law Department	.95		
Real Estate Department	.34		
General Account	14.70		
Electrical Department	4.95		
		215.61	
Mosior Garage (auto service)—			
Maintenance and Operation Account	$ 56.00		
Electrical Department	70.00		
		126.00	
Burr-Vack Company (supplies)—			
Clerical Department	$ 15.14		
General Account	1.00		
		16.14	
Amounts carried forward		$ 436.45	$ 63,725.10

Amounts brought forward		$ 436.45	$ 63,725.10
Clerical Department	$ 3.00		
General Account	3.00		
		6.00	
L. F. King, Clerk (special roll, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 144.00		
Electrical Department	96.00		
		240.00	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 96.44		
Maintenance and Operation Account	26.18		
Law Department	8.78		
		131.40	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 1.05		
Maintenance and Operation Account	87.06		
		88.11	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 17.15		
Maintenance and Operation Account	8.16		
Real Estate Department	3.44		
		28.75	
			930.71
Grand Total			$ 64,404.22

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN.
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance *(except as to vouchers to A. Guthrie & Co., Inc., for labor and material for extra work on the Calumet-Sag Channel, for $40.50, and to Edmund D. Adcock, for services rendered in re Lake Level Controversy, for $669.50, on which Mr. Nance voted "nay")* and Paullin—Seven on all vouchers and eight on all vouchers with the exceptions noted.

Nays—None *(except as above stated).*

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that since the drawings were made and the contract entered into with the Leyden-Ortseifen Company for the construction of the Des Plaines River Sewage Treatment Plant, that experiments which have been made in the sewage treatment plant in Milwaukee indicate that a higher degree of efficiency can be attained by constructing the settling basin to a minimum depth of fifteen instead of thirteen feet as specified, which will increase the cost of this particular item $3,500.00, also by increasing the size of

the pipes to furnish the air to the aeration tanks from six to eight inches as specified to eight to ten inches at an additional cost of $3,500.00, and by making certain changes in the nipples, traps, etc., at an additional cost of $1,500.00. Said increases in the various items will be paid for at the unit prices named in said contract, and he requests that he may order said contractor to perform said additional work under the "extra work" clause of its contract for the construction of said plant.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to order the Leyden-Ortseifen Company to perform the work above specified under the "extra work" clause of its contract for the construction of the Des Plaines River Sewage Treatment Plant, provided that the cost of same shall not exceed the sums of $3,500.00, $3,500.00 and $1,500.00 for the respective items of work above stated.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on June 26, 1919 (page 847 of the Proceedings) authorized the Clerk to advertise for bids for wrecking a portion of the "Union Loop Power House" and for widening the South Branch of the Chicago River to a uniform width of 200 feet by dredging three parcels of real estate, provided that no contract for said work should be entered into between the successful bidder for said work until certain real estate was acquired from the Chicago, Rock Island & Pacific Railway Company and the New York Central Railroad Company.

Your Committee further reports that it is advised by the Attorney that said real estate has been acquired, and the Chief Engineer has presented the completed plans and specifications for doing said work to your Committee for its approval.

Your Committee further reports that it has considered said plans and specifications prepared by the Chief Engineer, has approved same, and, therefore, recommends the passage of the following order:

Ordered, That the plans and specifications prepared by the Chief Engineer for doing the work above specified be, and the same are hereby, approved.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that he has practically completed the plans and specifications for the building to be erected on the foundations now under construction for the Des Plaines River Sewage Treatment Plant, and that inasmuch as the Board is now meeting at intervals of two weeks, he requests that authority be given the Clerk to advertise for bids for doing said work in accordance with the completed plans and specifications therefor.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to advertise for bids for doing said work, provided, however, that no contract shall be entered into between the Sanitary District and the successful bidder for said work until said plans and specifications have been approved by the Board.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in order to prepare plans and specifications for the intercepting sewer to be built in Edbrooke avenue and Edbrooke avenue produced from the Calumet sewage pumping station to the center thread of the Calumet River, it will be necessary to make borings to ascertain the nature of the material to be encountered at an estimated cost of $500.00, and he requests that he may be authorized to have said work done.

Your Committee having considered said request, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to expend the sum of not to exceed $500.00 for doing the work above specified.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in order to make the necessary repairs to the walls along the Main Channel it is necessary to have the use of a heavy motor boat to transport men and materials and to haul scows, from place to place, as needed. He further states that Mr. Stanley Hart, the owner of the "American Eagle," a 44-foot motor boat, has offered to rent said boat to the Sanitary District during the present working season at a rental of $300.00 per month, which sum is to cover the services of Mr. Hart, the cost of gasoline, oil and repairs and for all liability for damages to said boat and to persons and property, occasioned by the operation and use of said boat, and he recommends that said offer be accepted.

Your Committee, having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to accept the offer of Mr. Stanley Hart to rent said boat on the terms proposed.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting of May 1, 1919 (pages 365A and 365B of the Proceedings), bids for furnishing coal screenings for the Thirty-ninth Street and Lawrence Avenue Pumping Stations, having considered all the proposals presented and qualifications of each bidder, together with a report submitted by the Chief Engineer, is of the opinion that the bid of the Sangamon County Coal Co., the lowest bidder, be rejected for the reasons hereafter stated. The Chief Engineer in his report states than when said bids were first canvassed your Committee concurred in his recommendation that the lowest bidder, the Sangamon County Mining Co., be allowed to furnish a number of cars of the grade of coal offered and that said coal be analyzed to determine its proportion of moisture, ash and B. T. U.'s per pound of dry coal. He further states that from analyses of samples selected from sixteen cars of coal, it appears that none of the coal furnished equaled the guarantee specified.

Your Committee having considered the matter, is of the opinion that the Sterling Midland Coal Company, the next lowest bidder, should be allowed to furnish a number of cars of the grade of coal it offers in order that the coal may be analyzed to determine the proportion of moisture, ash and B. T. U.'s per pound of dry coal therein, and if said coal equals the guarantee specified that then a contract be entered into between the Sanitary District and said company for all the coal advertised for and therefore recommends the passage of the following order:

Ordered, That the bids of the Sangamon County Mining Co. for furnishing coal screenings for the Thirty-ninth Street and Lawrence Avenue Pumping Stations, be, and the same is hereby rejected for the reasons stated, and it is further

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to purchase from the Sterling Midland Coal Company a sufficient number of cars of coal of the grade of coal offered in its bid to enable him to determine by analyses whether the proportions of moisture, ash and B. T. U.'s contained therein equal the guarantee specified and report the result of said analyses to the Board for action, and it is further

Ordered, That the checks of all bidders except the Sterling Midland Coal Company and the Bickett Coal & Coke Company be returned to them.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompaying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on March 14, 1918 (page 183 of the Proceedings), authorized the execution of an agreement dated December 5, 1917, between the Chicago Union Station Company, the Sanitary District and the Pennsylvania Company with reference to the construction of a dock wall by the Chicago Union Station Company along the established west dock line of the south branch of the Chicago River between West Madison street and the north line of Van Buren street and the use by the Sanitary District of certain pieces and parcels of land described in said agreement, under the terms and conditions therein set forth.

Your Committee further reports that it has received a communication from the Chicago Union Station Company in which it states that since the execution of said agreement was authorized by the Sanitary District, the Pennsylvania Railroad Company has acquired all the capital stock of the Pennsylvania Company and has succeeded to all its rights under said agreement, and requests that the Pennsylvania Railroad Company may be substituted as a party to said agreement instead of the Pennsylvania Company, and also requests that the date of said agreement be changed and other minor changes made.

Your Committee further reports that the Chief Engineer and Attorney have considered such changes and make no objection thereto, and your Committee is of the opinion that the request of said company should be granted and therefore recommends the passage of the following order:

Ordered, That the agreement above referred to, and the same is hereby, amended in the following particulars, to-wit:

(a) By substituting as a party to said agreement the Pennsylvania Railroad Company in the place of the Pennsylvania Company.

(b) By changing the date of said agreement from the fifth day of De-

cember, 1917, to the fourteenth day of March, 1918

(c) By striking out the word "owned" as printed on the 39th and 43d lines in the first column on page 185 of the Proceedings and inserting in lieu thereof the word "controlled."

(d) By striking out the words "owned by the Pennsylvania Company being" as printed on the 21st and 22d lines of the second column on page 185 of the Proceedings.

(e) By inserting after the word "being" in the third line in the first column on page 186 of the Proceedings, the words "shown in brown on said exhibit 'A'" and by striking out the words: "the part owned by the Pennsylvania Company being shown in brown on said exhibit 'A,'" as printed on the third, fourth and fifth lines in said column and page.

(f) By striking out the words "owned by the Pennsylvania Company being" as printed in the 25th and 26th lines in the second column on page 187 of the Proceedings.

(g) By inserting after the word "shown" in line 61, second column, page 187 of the Proceedings the words: "in brown."

(h) By striking out the words: "the part owned by the Pennsylvania Company being shown in brown," as printed on 1st, 2d and 3d lines in the first column of page 188 of the Proceedings, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in triplicate the agreement above specified as amended, the same having been duly executed as amended, by said Chicago Union Station Company, and said Pennsylvania Railroad Company and consented to by the Chicago, Pittsburgh & Fort Wayne Railway Company and by the Director General of Railroads.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting held July 3, 1919 (page 851-A of the Proceedings), bids for the construction of the Sprinkling Filter and appurtenances in the Village of Morton Grove, having considered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the Ready & Callaghan Coal Company of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for the construction of the Sprinkling Filter and appurtenances in the Village of Mor-

ton Grove be and the same is hereby awarded to the said Ready & Callaghan Coal Company for the unit and lump sum prices named in its bid which aggregate the sum of $37,539.75, which is exclusive of the item for seeding and planting, which work is omitted, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said Ready & Callaghan Coal Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK.
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary Discrict of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in the year 1916 the Highway Commissioners of Calumet Township constructed a tile sewer along the east side of Division street, one-half of which street is in the City of Blue Island, which empties sewage on to the north slope of Contract Section 13 of the Calumet-Sag Channel. He further states that this sewer was constructed after the contract for the excavation and collateral work on said Contract Section of said channel had been let to A. Guthrie & Co., Inc., and the work of connecting said sewer to said channel through the retaining wall of the same was not included in said contract, although an outlet was provided in said wall for making said connection. He further states that in order to avoid a local nuisance this connection should be made at an estimated cost of $500.00, and he requests that he may direct A. Guthrie & Co., Inc., to perform said work under the "extra work" clause of its said contract with the Sanitary District.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized to order A. Guthrie & Co., Inc., to perform the work above specified under the "extra work" clause of its said contract, provided the cost of the same shall not exceed the sum of $500.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy,

Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on March 20, 1919 (page 278 of the Proceedings), authorized the Chief Engineer to install weirs at the outlets of sewers entering the North Branch of the Chicago River in connection with his study of the proper method of caring for the sewage entering said branch of the river.

Your Committee further states that it has received a communication from the Chief Engineer in which he states that two automatic gauges which he had installed in connection with said work were stolen, and in order to replace said two gauges and procure three additional automatic gauges for keeping an automatic record of the height of the water in said North Branch, he requests authority to purchase five automatic gauges at an estimated cost of $500.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to purchase in the open market for the lowest price obtainable five automatic gauges for use in the work above specified, provided the cost of same does not exceed the sum of $500.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development reports that it has received a communication from the Electrical Engineer in which he states that the following contracts for residence lighting have been executed by him:

Illinois Packing Co., 37th place and Morgan street, in Chicago.

Mrs. W. Firnhaber, 645 Vermont street.

Rev. M. Einfeldt, 476 Grove street.

Fred Brincken, 513 Elm street.

Mrs. Chas. Ulrich, 496 High street.

Mrs. D. M. Clopp, 244 Western avenue.

Fred W. Steinweg, 312 Olive street.

Mrs. E. Mear, 287 Burr Oak avenue.

All in Blue Island, Ill.

John A. Anderson, 3016 Carol avenue.

Josephine Sverak, 6511 27th street.

Thos. H. Farrell, 3317 Berkeley avenue.

Mrs. A. A. Miller, 6430 33d street.

Jesse R. Dilley, 3227 Maple avenue.

M. C. Lewis, 3224 Ivison avenue.

P. M. Lewis, 3320 Ivison avenue.

All in Berwyn, Ill.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the action of the Electrical Engineer in executing the con-

tracts for residence lighting with the parties above mentioned be, and the same is hereby ratified and confirmed.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development herewith presents contracts with the Otley Paint Mfg. Co., 1742 North Winchester avenue, Chicago, and with Harry A. Sellen, 3145 Ivison avenue, Berwyn, wherein the Sanitary District agrees to furnish and said parties agree to take electrical energy for the periods of time and upon the terms and conditions therein set forth. All of said contracts have been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contracts which have heretofore been executed by said parties.

Respectfully submitted,
H. E. LITTLER,
Chairman.
MATT A. MUELLER,
WM. J. HEALY,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Employment

Mr. Clark presented the following report from the Committee on Employment:

CHICAGO, July 17, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of action taken:

NEW APPOINTMENTS PROVIDED FOR IN *1919* BUDGET.

Engineering Department.

Victor Tortoriello, Rodman, $100 per month.

Jack Wurts, Chemical Assistant, $100 per month.

Horace D. White, Sub-Instrument Man, $130 per month.

Russell S. Smith, Sub-Instrument Man, $130 per month.

Andrea Filpi, Sub-Foreman, $5.50 per day.

Matt Henderson, Laborer, 50 cents per hour.

James Jamb, Laborer, 50 cents per hour.

Tony Rodighiero, Laborer, 50 cents per hour.

E. Tillman, Laborer, $4.50 per day.

Frank Wagner, Laborer, 50 cents per hour.

Jos. Flynn, Laborer, 50 cents per hour.

Patrick McNichols, Laborer, 50 cents per hour.

Leo Quimet, Laborer, 50 cents per hour.

Ollie Ott, Laborer, 50 cents per hour.

Ernest Johnson, Laborer, 50 cents per hour.

Clarence Gerber, Laborer, 50 cents per hour.

John F. Sullivan, Laborer, 50 cents per hour.

Leo Dolan, Laborer, 50 cents per hour.

Ed. Schneider, Laborer, 50 cents per hour.

Joseph Sullivan, Laborer, 50 cents per hour.

O. Bergman, Mechanic, 60 cents per hour.

J. Corso, Laborer, 50 cents per hour.

Electrical Department.

Horace Roberts, Laborer, 50 cents per hour.

Lee H. Wilkison, Lineman (temporary), $165 per month.

Frank Young, Lineman (temporary), $165 per month.

Harry L. Stanley, Lineman (temporary), $165 per month.

Wm. F. Schultz, Lineman (temporary), $165 per month.

Jos. G. Studley, Lineman (temporary), $165 per month.

INCREASES.

Engineering Department.

Charles Loetz, Sub-Foreman, from $5 to $5.50 per day.

Patrick Holland, Steamfitter, from $7 per day to $1 per hour.

Thos. McCarten, Steamfitter, from $7 per day to $1 per hour.

John Cameron, Steamfitter, from $7 per day to $1 per hour.

Patrick Carlin, Well Digger, from 77½ cents per hour to 90 cents per hour.

Mike Burke, Well Digger, from 77½ cents per hour to 90 cents per hour.

Pete Lannon, Windlass Man, from 67½ cents per hour to 82½ cents per hour.

Thos. Walsh, Windlass Man, from 67½ cents per hour to 82½ cents per hour.

REINSTATEMENTS DUE TO HONORABLE DISCHARGE FROM THE *U. S.* ARMY. SERVICE.

Electrical Department.

David W. Geary, Groundman, $115 per month.

Geo. D. Brooks, Cable Splicer Helper, 75 cents per hour.

Transfer.

I. L. Damrow, from Lineman at $165 per month to Foreman at $190 per month (during vacation period).

Respectfully submitted,

GEORGE W. PAULLIN, *Chairman.*
H. E. LITTLER,
JAS. H. LAWLEY,
MATT. A. MUELLER,
WALLACE G. CLARK,
Committee on Employment.

Mr. Clark moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Lawley presented the following ordinance:

AN ORDINANCE

Of the Board of Trustees of the Sanitary District of Chicago Appropriating Additional Moneys for Its Corporate Purposes to Be Expended During the Fiscal Year Beginning January 1, 1919, and Ending December 31, 1919.

Be It Ordained by the Board of Trustees of the Sanitary District of Chicago:

SECTION 1. That this ordinance be, and the same is hereby, termed an "Additional Appropriation Bill of The Sanitary District of Chicago for the Fiscal Year Beginning January 1, 1919, and Ending December 31, 1919."

SEC. 2. That the following amounts, or so much thereof as may be authorized by law and as may be needed, are hereby appropriated from any receipts of The Sanitary District of Chicago not heretofore appropriated which may be derived from any other source than from annual taxes heretofore levied in accordance with the law for the corporate purposes of The Sanitary District of Chicago for the fiscal year beginning January 1, 1919, and ending December 31, 1919. The Department and the purposes for which appropriations are made and the amounts appropriated for the various purposes are as follows:

3—DEPARTMENT OF ILLINOIS AND MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

1—*Personal Service.*

11. Salaries and Wages of Regular Employes, General Administration:	
Junior Engineers, 2 at $2,100 for 5 months	$ 1,750.00
Rodmen, 12 at $1,200 for 5 months	6,000.00
Launch Engineer, 1 at $1,800 for 5 months	750.00
13. Compensation for Personal Service other than Salaries and Wages	200.00

2—*Contractual and Impersonal Service.*

211. Railroad and Steamship Transportation (other than local) of persons.	1,000.00
213. Railroad and Steamship Transportation of Things	50.00
235. Blue Printing	100.00
262. Taking care and cleaning of motor vehicles	25.00
27. Boarding and Lodging—Includes service in connection with the feeding and housing of persons only when their routine of living is disturbed necessarily in the prosecution of the business of the Sanitary District	5,000.00
289. Impersonal Service, N. O. C.	50.00
29—5271. Repairs and Replacement Service of Motor Vehicle Equipment	100.00
29—5273. Repairs and Replacement Service of Floating Equipment	100.00

3—*Supplies.*

322. Liquid Fuels	250.00
363. Lubricants	125.00

4—*Materials and Parts for Repairs and Replacements.*

452. Motor Vehicle and Motor Boat Parts	250.00

5—*Equipment.*

5271. Motor Vehicle Equipment	1,683.32
542. Life Saving Equipment	25.00
554. Engineering and Drafting Equipment	1,100.00
57. Uniforms and Wearing Apparel	255.00

8—*Fixed Charges.*

815. Fees for Permits and Privileges	6.00
853. Automobile Insurance	78.00

9—*Custom Work and Contingencies.*

99. Contingencies	1,000.00
	$19,897.32

SEC. 3. The appropriation herein of the amounts for the payments of contract liabilities, or to defray the expense of any project or purpose, shall not be construed as an approval by this Board

of any of said contract liabilities, or of any project or purpose mentioned herein, but shall be regarded only as the provision of a fund or funds, for the payment thereof when said contract liabilities have been found to be valid and legal obligations against The Sanitary District of Chicago, and when properly vouchered, audited and approved by the Board of Trustees, or when any project or purpose is approved and authorized by the Board of Trustees of The Sanitary District of Chicago, as the case may be.

SEC. 4. This ordinance shall take effect and be in full force from and after its passage and publication in accordance with the law.

Mr. Lawley moved that the ordinance be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Committee of the Whole.

Mr. Littler moved that the Board resolve itself into the Committee of the Whole to consider the advisability of the Sanitary District renewing its expired contract for the sale of surplus electricity to the Commonwealth Edison Company.

The motion prevailed.

The Chairman called Mr. Carr to the chair.

The Committee rose and the Board resumed business.

Payroll of The Sanitary District of Chicago for the Month of March, 1919.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakwood Ave., President of Board	$ 625.00
Wm. J. Healy, 716 W. Madison St., Trustee	416.66
Harry E. Littler, 2505 N. Washtenaw Ave., Trustee	416.66
Willis O. Nance, 30 N. Michigan Ave., Trustee	416.66
Wallace G. Clark, 30 N. Michigan Ave., Trustee	416.66
George W. Paullin, 30 N. Michigan Ave., Trustee	416.66
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.66
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.66
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.66
Wm. B. Foley, 819 Independence Blvd., Secretary to President	291.67
Total	$ 4,249.95

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7941 So. May St., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 S. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	150.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	175.00
Daniel Huguenin, 920 Audrie Pl., Superintendent of Efficiency	225.00
Jas. J. Kropacek, 3135 Normal Ave., Stenographer and Index Clerk, 12 days	54.19

Accounting and Record Division

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00

Chas. Dingee, 912 Lake Ave., Wilmette, Ill., Warrant and Voucher Record	160.00
G. A. Kelly, 2049 W. Ohio St., Budget Bookkeeper	250.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Francis J. Sullivan, 2422 W. Superior St., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00
Purchasing Division.	
Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Helen Shine, 1118 W. Garfield Blvd., Stenographer	100.00
Cashier's Division.	
Charles O'Leary, 5705 Union Ave., Cashier	125.00
Temporary Employe.	
Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Receiving Clerk 26 days	91.00
Total	$ 4,856.86

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Irene Mueller, 5017 S. Wood St., Secretary-Stenographer	135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 260.00

DEPARTMENT OF LAW.

C. Arch Williams, 4536 Drexel Blvd., Attorney	833.33
Ross C Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	500.00
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst., Attorney	541.68
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
Joseph L. Lisack, 2703 N. Central Park Ave., Asst. Attorney	250.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	250.00
George H. Hough, 500 Diversey Pkwy., Asst. Attorney	250.00
A. A. Bach, 6005 S. La Salle St., Law Clerk	200.00
Matilda M. Lynn, 5343 Kenmore Ave., Stenographer and Voucher Clerk	125.00
Miriam Ehrlich, 3129 Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	175.00
Graham B. Trainer, 5202 Cornell Ave., Messenger	85.00
George Neupert, 75 W. Jackson Blvd., Investigator	175.00
J. Walter Nielsen, 2204 Kimball Ave., Docket Clerk	125.00
Francis Rodney, 537 E. 34th St., Stenographer	110.00
Lillian Gottschalk, 2505 N. Washtenaw Ave., Stenographer	125.00
Total	$ 7,013.34

DEPARTMENT OF POLICE.

Wm. E. Carter, 829 Simpson St., Evanston, Ill., Marshall	250.00
Joseph Kennefick, 3813 Wallace St., Sergeant	135.00
James Haggerty, 3201 Princeton Ave., Sergeant	135.00

Emil Wanderer, 1952 W. 22nd Pl., Sergeant	135.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	125.00
Emil Klank, 4616 S. Western Ave., Patrolman	125.00
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	125.00
Tony Alessi, 2547 Wallace St., Patrolman	125.00
John Conlon, 360 Wendel St., Patrolman	125.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	125.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	125.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	125.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	125.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	125.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	125.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	125.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	125.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	125.00
John E. Pierce, 4080 S. Wells St., Patrolman	125.00
James Mooney, 3450 Walnut St., Patrolman	125.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	125.00
Charles A. Ison, 5926 S. Wood St., Patrolman	125.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	125.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	115.00
Frank Kouba, 656 W. 18th St., Patrolman	115.00
N. C. Van Slooten, 2103 N. Karlov Ave., Patrolman	100.00
Edward Marose, 2622 S. Trumbull Ave., Patrolman	100.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	125.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
George A. Keller, 2820 Warren Ave., Patrolman	115.00
J. T. Johnson, Lemont, Ill., Patrolman	115.00
Barney Klecka, 1853 S. Western Ave., Patrolman	115.00
Chas. R. Fross, 801 E. 41st St., Patrolman	115.00
Michael Conway, 1944 N. Lincoln St., Patrolman	115.00
Jos. W. Doratis, 10455 S. Michigan Ave., Patrolman	100.00
Fred O. Wolff, 2023 Superior St., Patrolman	100.00
Jas. Hughes, 1836 N. Paulina St., Patrolman	125.00
Frank J. Raetzke, 2701 S. Karlov Ave., Patrolman	100.00
Frank L. Sequeens, 4847 S. Loomis St., Patrolman	100.00
Louis J. Christianson, 4335 Fullerton Ave., Patrolman	100.00
Edw. R. Hruby, 1528 S. Kenneth Ave., Patrolman	100.00
Walter Richards, 3017 Fulton St., Patrolman	100.00
H. M. Legel, 918 N. Fairfield Ave., Patrolman	100.00
W. Paine, 210 Honore St., Patrolman	100.00
W. E. Kroger, 4453 Bernard Ave., Patrolman, 13 days	41.94
Total	$ 5,571.94

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 550.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	300.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	200.00
O. W. Boers, Chillicothe, Ill., Sub Asst. Engineer	200.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	160.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	130.00
L. H. Welcome, 552 W. 35th St., Rodman	115.00
John Markham, 1243 Foster Ave., Chicago, Ill., Watchman	100.00
Total	$ 1,755.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 7.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	6.00

Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	7.00
Joseph Limacher, Minooka, Ill., Gauge Reader	6.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	6.00
William Carnegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	6.00
M. Brumbach, La Salle Co. Asylum, Ottawa, Ill., Gauge Reader	6.00
Sam G. Belt, 1006 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	11.00
John Brookman, Seneca, Ill., Gauge Reader	6.00
George A. Campbell, Marseilles, Ill., Gauge Reader	6.00
Noah Morial, Marseilles, Ill., Gauge Reader	6.00
James McGrogan, Dayton, Ill., Gauge Reader	7.00
C. H. Barnard, C. B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	11.00
George F. Keeley, Wilmington, Ill., Gauge Reader	6.00
Bernhard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	7.00
Peter De Groot, Peru, Ill., Water Sampler and Gauge Reader	11.00
Henry Harbeck, Utica, Ill., Gauge Reader	6.00
David Gleason, DePue, Ill., Gauge Reader	6.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	6.00
Philip Riley, Lacon, Ill., Gauge Reader	6.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	6.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	6.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	6.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	6.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	6.00
M. E. Eveland, Lewistown, Ill., Gauge Reader	6.00
William LeTissier, Bath, Ill., Gauge Reader	6.00
W. L. Waters, Browning, Ill., Gauge Reader	6.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	6.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	6.00
Total	$ 199.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly, 429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	416.66
Philip Harrington, 500 Diversey Parkway, Division Engineer	416.66
Murray Blanchard, 4355 Lake Park Ave., Assistant Engineer	250.00
E. L. Cooley, 2136 Indiana Ave., Hyd. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Res. Engineer	200.00
J. T. Soderstam, 1211 Newport Ave., Draftsman	175.00
Fred W. Kirk, 68 E. 56th St., Draftsman	175.00
M. P. Williams, 3905 Van Buren St., Draftsman	175.00
R. G. Galke, 1834 Eddy St., Draftsman	175.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
Nellie McArdle, 8019 Green St., Stenographer	125.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	140.00
Edwin S. Crowe, 2318 N. Kenneth Ave., Tracer	100.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	333.33
Ingolf Erdal, 1506 S. 4th Av., Maywood, Bridge Designer	225.00
Edwin A. Howes, 5304 Windsor Ave., Bridge Designer	225.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Designer	225.00
Richard DeYoung, 10226 State St., Bridge Designer	225.00
Ray C. Brown, 1249 Foster Ave., Draftsman	200.00
A. M. Finkel, 1610 S. Turner Ave., Tracer	150.00
Stanley A. Jankowski, 3222 Wall St., Bridge Tracer	130.00
F. E. Helmick, 946 W. 59th St., Sub Instrument Man	130.00

Record Division.

W. T. Lynch, 5643 Wayne Ave., Record Clerk	200.00
Theodore Buskirk, 3903 Ellis St., Junior Engineer	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	175.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Sub Instrument Man	130.00
E. Edinger, 200 E. 33rd St., Asst. Receiving Clerk	130.00
Geo. W. Schmidt, 1143 Oakdale Ave., Computer	120.00
Gertrude Scharlau, 4231 N. Whipple St., Stenographer	110.00
John Brunton, 5072 Lincoln Ave., Computer	120.00
Elaine Slossman, 4842 Forestville Ave., Stenographer, 15 days	55.00
Total	$ 8,563.31

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Frank Palermo, 7037 Hermitage Ave., Launch Engineer	125.00
John Murphy, 3740 Emerald Ave., Rodman	115.00
Jos. J. Kelly, 3155 Union Ave., Rodman	115.00
Total	$ 968.33

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 550.00
Milton F. Stein, 6753 Lafayette Ave., Asst. Engineer, 15 days	112.50
L. C. Whittemore, 1216 E. 54th St., Asst. Sanitary Engineer	275.00
O. L. Eltinge, 5144 Hyde Park Blvd., Asst. Engineer	225.00
E. R. Richards, 8225 S. Wabash Ave., Draftsman	150.00
John R. Palmer, 550 Elmwood Ave., Evanston, Ill., Asst. Chemist	150.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Resident Engineer	200.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
E. H. Morgan, 15418 Loomis St., Harvey, Asst. Chemist	150.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	150.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Assistant	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A., Asst. Chemist	125.00
Nelson J. Gothard, 340 E. 56th St., Asst. Chemist, 26 days	130.66

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	275.00
Arthur A. Bleau, 3141 Princeton Ave., Asst. Opr. Engineer	150.00
William A. Dundas, 5521 Sangamon St., Asst. M. Engineer	175.00
D. P. Fleming, 5959 Superior St., Asst. M. Engineer	175.00
Total	$ 3,543.16

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	416.66
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. B. Barker, 550 E. 50th Pl., Asst. Engineer	225.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Asst. Engineer	225.00
N. R. Herlihy, 2743 N. Albany Ave., Junior Engineer	175.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Gibson E. Gorman, 2731 W. 35th St., Sub-Instrument Man	130.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Computer	120.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Computer	120.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 W. Ohio St., Sub-Instrument Man	130.00
Robert Gilmartin, 3303 S. Seeley Ave., Computer	120.00

Thomas Doyle, 3527 Lowe Ave., Rodman, 24½ days	92.74
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
George T. Giles, 4862 Winthrop Ave., Rodman	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Louis E. Lequer, 2929 N. Albany Ave., Instrument Man, 23½ days	116.16
P. J. Whalen, 4816 Union Ave., Rodman	115.00
J. J. O'Reilley, 3805 N. Crawford Ave., Rodman, 23½ days	88.85
Thos. J. Mooney, 1800 So. Clifton Ave., Rodman, 26½ days	100.16
Richard Boegelsack, 10522 Avenue M, Rodman	115.00
J. J. Savage, 407 S. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	115.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	115.00
Total	$ 3,875.72

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Resident Engineer	200.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector	115.00
Maurice J. Powers, 3621 Union Ave., Rodman	115.00
Edward E. Bochmann, 473 York Pl., Blue Island, Sub-Instrument Man	130.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
W. A. Grundy, 2043 Ogden Ave., Inspector	125.00
Total	$ 1,266.00

Sag Channel Construction Division.

John D. Hurley, Willow Springs, Asst. Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Sub-Instrument Man	130.00
Richard F. Kelly, 4442 So. Sawyer Ave., Sub Instrument Man	130.00
Arthur J. Joungberg, 1408 Melrose St., Rodman	115.00
Geo. Parker, 1816 Prairie Ave., Computer	120.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Rodman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
Carmine Laurino, 909 S. State St., Rodman	115.00
Total	$ 1,276.00

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, North Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer, 15 days	75.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Max Nork, 4428 S. Albany Ave., Machinist, 172 hours	163.20

Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
John A. Miller, 2543 N. Racine Ave., Stationary Engineer	150.00
Jos. Runnella, 455 W. 25th Pl., Laborer	96.00
Jos. Vengler, 6429 S. Peoria St., Craneman, 26 days	182.00
Joe Ranctre, 2512 Lowe Ave., Laborer	96.00
Louis Barzen, 2810 S. Wells St., Laborer	96.00
Andrew Haberzetle, 2607 S. Halsted St., Fireman	110.00
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank J. Dushek, 3232 Wallace St., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler	110.00
Samuel Vanderweil, 24 E. 99th Pl., Laborer	96.00
Arthur LaBeau, 5524 Winchester Ave., Laborer	96.00
Frank Belcastro, 2454 W. Huron St., Laborer	96.00
James Roach, 2949 Lyman St., Laborer	96.00
John Buttny, 3755 Hermitage Ave., Laborer	96.00
Fred Bergman, 6616 S. Robey St., Fireman	110.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer	96.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 308 W. 27th St., Laborer	96.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter, 24 days	168.00
Patrick Holland, 4156 Wells St., Steam Fitter, 23 days	161.00
Bruno Salarno, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
E. J. Ryan, 2715 Emerald Ave., Oiler	110.00
Jos. Marchacek, 2001 18th Pl., Laborer, 10 days	30.97
Emil Dahms, 3715 So. Honore St., Laborer, 19 days	58.84
Sam Stewart, 5234 State St., Laborer, 14 days	43.36
Total	$ 4,550.37

LAWRENCE AVENUE PUMPING STATION.

James A. Shay, 5300 S. Peoria St., Engineer in Charge	200.00
Pat Grady, 835 W. 54th Pl., Laborer	96.00
Jos. McGuire, 2612 Fullerton Ave., Laborer	96.00
M. F. Schopf, 1107 Wrightwood Ave., Stationary Engineer	150.00
Daniel Gleason, 848 Rush St., Machinist and Engineer	150.00
Christopher J. Heaney, 7531 Yale Ave., Stationary Engineer, 15 days	75.00
Matt. O'Connell, 3520 Union Ave., Laborer	96.00
Tho. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 2144 Warner Ave., Oiler	110.00
George O'Leary, 5705 Union Ave., Boiler Washer, 3 days	10.65
Albert G. Selle, 429 N. Sawyer Ave., Fireman	110.00
James O'Leary, 5502 Leland Ave., 10 days	35.49
Adam Klein, 2745 Ward St., Fireman	110.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave., Fireman	110.00
T. J. Reaney, 3838 Park Ave., Laborer	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter, 24 days	169.75
Bronislaw Wosny, 2338 N. Maplewood Ave., 3 days	10.65
Jos. Cullen, 3535 S. Hamilton Ave., Oiler, 19½ days	70.97
Jno. S. Czumnarski, 1740 Brigham St., 15 days	55.00
Alex. Kluczuski, 2443 W. 34th Pl., Laborer, 31 days	99.43
Total	$ 2,575.36

Survey North Branch Chicago River, Account Sewerage Disposal Plant.

Norman Newlands, 4902 N. Albany Ave., Resident Engineer	200.00
Walter H. Faget, 3565 W. Van Buren St., Jr. Engineer	175.00
James L. Hackett, 4932 Forrestville Ave., Jr. Engineer	175.00
Rudolph Christoph, 2159 Melrose St., Superintendent	165.00
Wm. J. Jaeger, 3028 Emerald Ave., Sub-Instrument Man	130.00
Geo. F. Fitzgerald, 189 Walnut St., Blue Island, Sub-Instrument Man	130.00
Wm. J. Bonn, 1343 W. Garfield Blvd., Sub-Instrument Man	130.00
John S. Malkowski, 947 W. Chicago Ave., Sub-Instrument Man	130.00
Martin P. Riley, 9017 Commercial Ave., Computer	120.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00
Henry Altman, 7000 Laflin St., Rodman	115.00
Milton J. Kman, 5214 Lowe Ave., Rodman	115.00
James J. Ryan, 3729 Emerald Ave., Rodman	115.00
John Richards, 2641 Princeton Ave., Rodman	115.00
John Witt, 2057 W. 21st Pl., Rodman	115.00
Clarence E. Wilson, 2817 N. Clark st	115.00
Chas. McMorrow, 6817 Wabash Ave., Rodman	107.50
Total	$ 2,267.50

LOCK, DAM AND BRIDGE TENDER.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, Lockport, Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
F. W. Worst, 121 E. 10th St., Lockport, Ill., Asst. Dam Tender	100.00
Total	$ 940.00

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
Marie Reardon, 7002 Laflin St., Record Clerk, 27 days	124.19
May Broderick, 4208 Adams St., Stenographer	125.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., M. & S. Clerk	135.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	125.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
Walter J. Merritt, 513 S. Leavitt St., Ledger Clerk	125.00
Geo. Bachelder, 4600 Troy St., Clerk	125.00
Walter F. Kuhneman, 6353 Sangamon St., Clerk	125.00
John Conlon, 3343 Lowe Ave., Office Asst	75.00
Clarence F. Reich, 2703 N. Ahland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3222 Osgood St., Clerk	125.00
Leo. J. Feeney, 8942 S. Laflin St., Messenger	60.00
Frank Eckert, 2718 N. Talman Ave., Ledger Clerk, 13 days	52.39
H. I. Stephens, 65 New St., Blue Island, Ill., Clerk	75.00
Harry A. Steinmyer, 1928 Spaulding Ave., Ledger Clerk, 19 days	78.63

Storeroom.

John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 754 W. 54th St., Warehouseman	100.00
Michael Bell, 7927 S. Morgan St., Warehouseman	100.00
J. Reuhmann, 6544 S. Lincoln St., Storekeeper	150.00
Chas. Trouth, 2929 Wentworth Ave., Watchman	96.00
Chas. Busch, 56 E. 100th St., Watchman	96.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
F. F. Anderson, 3719 Ohio St., Inspector	175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Thomas Kelly, 220 W. 106th Pl., Inspector, 15 days	87.50
Fred Meyer, 3510 Broadway, Draftsman	150.00
B. H. Young, 4209 Indiana Ave., Carpenter, 188 hours	150.40
C. R. Lyons, 3036 Shields Ave., Carpenter, 124 hours	115.20
J. C. Kraiss, 3327 S. Hamilton Ave., Painter, 188 hours	141.00

Engineering Division.

G. F. Maddox, 4442 Magnolia Ave., Draftsman	200.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00
W. B. Lambe, 1414 E. 53rd St., Inspector and Appraiser	150.00
John Miller, 4449 Lowe Ave., Draftsman	175.00

Testing Division.

F. A. DeMuth, 4929 W. 23rd St., Testing Engineer	215.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	165.00
H. E. Burket, 17 E. Ohio St., Electrician	155.00
E. P. Spreigel, 2451 Station St., Electrician	155.00
R. L. Walsh, 4445 Ellis Ave., Electrician	155.00
R. C. Pedrick, 2418 W. 36th St., Electrician	155.00
H. Hullinger, 1222W. 31st St., Electrician Helper	130.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	130.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	215.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	165.00
George Enright, 1439 W. Marquette Road, Meter Inspector	140.00
W. E. Jones, 4631 Lake Park Ave., Meter Inspector	140.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	115.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	140.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	140.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector Helper	115.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	300.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	240.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanston, Stenographer and Clerk	125.00
Jas. A. Haggerty, 3552 Van Buren St., Draftsman	125.00
Grace Lenz, 755 Bowen Ave., Temporary Telephone Operator, 7 days	22.23
J. P. Lynch, 2842 Union Ave., Foreman, 217 hours	108.50
T. O'Leary, 316 S. Aberdeen St., Laborer, 136 hours	61.20
Isabel Ward, 6548 Glenwood Ave., Telephone Operator	85.00
L. A. Jones, 3538 Vernon Ave., Relief Operator	125.00
J. T. Layton, 6511 S. Artesian Ave., Relief Operator	145.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	145.00
M. K. Badke, 2950 Keeley St., Vault and File Clerk	100.00

Max Ebler, 2226 Wabash Ave., Relief Operator	125.00
J. Mildenberg, 3728 N. Spaulding Ave., Relief Operator	125.00
Edw. Flynn, 3523 Western Ave., Janitor and Messenger	100.00
J. F. Vedder, 6834 Yale Ave., Load Desp.	180.00
W. J. Kloss, 3220 Sacramento Ave., Load Desp.	180.00
M. I. Coughlin, 434 E. 46th St., Load Desp.	180.00
J. S. Black, 6155 S. Laflin St., Load Desp.	180.00
Theo. Frantz, 5344 S. Winchester Ave., Boilerman	100.00
Patrick Connors, 10603 LaFayette Ave., Boilerman	100.00

Underground Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	225.00
J. Sharp, 2324 W. Madison St., Foreman	225.00
J. Lamping, 3016 Congress St., Foreman	190.00
C. C. Wilson, 3214 N. Whipple St., Foreman	190.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	190.00
I. L. Damrow, 6417 S. Campbell Ave., Lineman	165.00
C. O'Leary, 646 W. 47th Pl., Lineman	165.00
Edward Lee, 5343 Carpenter St., Lineman	165.00
W. F. Jones, 3306 Irving Ave., Lineman	165.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	165.00
A. R. Ver Schare, 7836 S. Carpenter St., Lineman	165.00
Fred Dushek, 3232 Wallace St., Lineman	165.00
Thos. Lane, 5740 S. Lincoln St., Groundman	115.00
James Britton, 3039 Pitney Court, Lineman	165.00
A. Jorgenson, 2153 Keystone Ave., Lineman	165.00
H. Inglebright, 1700 Park Ave., Lineman	165.00
Owen McLane, 6053 S. Halsted St., Lineman	165.00
J. R. Weston, 4709 Harrison St., Lineman	165.00
P. B. Simonton, 218 S. Western Ave., Temporary Foreman	190.00
Dennis Nolan, 448 Root St., Groundman	115.00
Thomas Woods, 1244 Washington Blvd., Groundman	115.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer, 184 hours	161.00
E. Pearson, 1020 Roscoe St., Cable Splicer, 190 hours	166.25
J. J. Elliott, 1364 E. 61st St., Cable Splicer, 190 hours	166.25
H. J. Berninger, 414 S. Lincoln St., Cable Splicer Helper, 190 hours	118.75
W. Brunsworth, 2921 W. 40th St., Cable Splicer Helper, 190 hours	118.75
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer Helper, 188 hours	117.50
A. J. Peck, 5010 Calumet Ave., Cable Splicer, 36 hours	31.50
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper, 186 hours	116.25

Inside Maintenance and Construction Division.

Jos. Miller, 6525 S. Marshfield Ave., Foreman	190.00
Henry Haag, 2633 Monroe St., Repairman	155.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	155.00
Paul Matt, 5108 N. Leavitt St., Repairman	155.00
John Weber, 2537 Calvin St., Asst. Repairman	130.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	130.00
Edw. Schneider, 4735 W. Huron St., Asst. Repairman	130.00
Thos. Sheahan, 2476 N. Albany Ave., Repairman	155.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	155.00
R. T. Kelly, 2912 Lowe Ave., Asst. Repairman	130.00
H. C. Peterson, 4448 Monticello Ave., Asst. Repairman	130.00

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	250.00
R. G. Close, 513 E. 11th St., Lockport, Operator	190.00
B. F. Konapack, 804 2nd Ave., Joliet, Operator	180.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	180.00
Geo. Simmons, Lockport, Ill., Asst. Operator	145.00

S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	180.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerberg, 103 Iowa Ave., Joliet, Machinist, 212 hours	180.20
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Asst. Operator	145.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	145.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 205 Miles Ave., Joliet, Oiler	125.00
Robert Curry, 110 Catalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Asst. Operator	145.00
A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist, 194 hours	164.90
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	155.00
M. C. Rich, Lockport, Ill., Maintenance Man	155.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Utility, 209 hours	146.20
G. Johnson, Lockport, Ill., Laborer, 152½ hours	126.25
P. Roach, Lockport, Ill., Laborer, 257½ hours	128.75
J. Boza, Lemont, Ill., Laborer, 255½ hours	127.80
M. Powalish, Lemont, Ill., Laborer, 247½ hours	123.75
C. Barr, Lockport, Ill., Laborer, 272 hours	136.00
R. Leidig, Lockport, Ill., Laborer, 225 hours	112.50
D. Faletti, Joliet, Ill., Laborer, 229 hours	114.50
A. Rodighiero, Lockport, Ill., Laborer, 290 hours	145.00
P. Lyons, E. 17th St., Lockport, Ill., Laborer, 274 hours	137.00
Alf. Johnson, 18th and Jefferson, Lockport, Ill., Laborer, 229 hours	114.50
Chas. Carlson, 12th St., Lockport, Ill., Laborer, 199 hours	99.50
J. Boe, 610 Webster St., Joliet, Ill., Carpenter, 74 hours	51.80
H. Murray, 9th St. and Hamilton Ave., Helper, 86 hours	51.60

Terminal.

Edw. Held, 3429 Parker Ave., Switchboard Operator	155.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	155.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	145.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator	145.00
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	145.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	155.00

Blue Island.

Wm. H. Greene, 639 York St., Blue Island, Operator	125.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	125.00
Chas. Weber, 230 Walnut St., Operator	125.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	125.00
S. J. Cannon, 1309 Emerson St., Locktender and Janitor	100.00
A. Underdown, 706 Main St., Evanston, Operator	125.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator	125.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator	125.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator	180.00
Knute Anderson, 6324 Wentworth Ave., Operator	145.00
Frank C. Lambert, 5526 S. Lincoln St., Operator	145.00
Henry Lawson, 1627 Orrington Ave., Evanston, Operator	145.00

Ashland Avenue.

C. J. Ward, 3001 S. Canal St., Operator	125.00
Robt. Perry, 1244 Washington Blvd., Operator	125.00
H. E. Reilly, 4445 Wallace St., Operator	125.00
W. D. Cotter, 6125 Justine St., Operator	11.61

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator	125.00
Frank Davidson, 932 Rush St., Operator	125.00
Chas. Devine, 1513 Greenwood St., Evanston	125.00

West Twelfth Street.

W. E. Nancarrow, 5106 Sunnyside Ave., Operator	125.00
P. J. English, 3416 S. Marshfield Ave., Operator	125.00
E. P. DeBarr, 825 George St., Operator	125.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator	125.00
R. Hardell, 3142 N. Robey St., Engineer	155.00
P. Kacyerzewski, 2354 Elston Ave., Operator	125.00
S. H. Reed, 2142 N. Crawford Ave., Operator	125.00

Forest Park.

R. W. C. Newmann, 7416 Washington St., Operator	125.00
A. Stange, 504 Ferdinand St., Operator	125.00
Thos. Podraza, 1363 W. Chicago Ave., Operator	125.00

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Operator	35.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Operator	25.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Operator	25.00

Utility Equipment Division.

Wm. J. H. Schultz, 3440 Fulton St., Superintendent	175.00
B. H. Stuber, 3029 Union Ave., Machinist, 184 hours	156.40
Charles F. Larson, 6718 St. Lawrence Ave., Machinist, 184 hours	156.40
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4405 Normal Ave., Washer	96.00
Sidney Smith, 1221 W. Rand St., Washer	96.00
Geo. B. Kelly, 834 N. Springfield Ave., Captain Robert R.	150.00
Thomas J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R.	150.00
George H. Gardner, 1932 Clifton Park Ave., Engineer, Robert R.	150.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A.	125.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur	125.00
John Dean, 607 Belden Ave., Chauffeur	12500
J. Neckerman, 4411 Federal St., Chauffeur	125.00
John Creen, 3002 Emerald Ave., Chauffeur	125.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R.	115.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	125.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	125.00
J. McCummisky, 5630 S. Carpenter St., Chauffeur	125.00
Jos. Allard, 3117 Normal Ave., Chauffeur	15.00

Temporary Roll—Architectural Division.

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Foreman	190.00
Wm. G. Zepp, 7836 S. Carpenter St., Lineman	165.00
Frank Hobbs, 2249 Bissell St., Lineman	165.00
Frank Guibard, 5731 Aberdeen St., Lineman	165.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	165.00
John J. Dassie, 3616 W. 83rd St., Lineman	165.00
J. M. Kelly, 6147 Newberry Ave., Lineman	165.00
D. McAvoy, 3317 W. Madison St., Lineman	165.00

W. Glass, 3738 Madison St., Lineman	165.00
Michael Hogan, 1507 W. 72nd St., Groundman	115.00
F. S. Allen, 4026 Washington Blvd., Lineman	165.00
Thos. J. Falls, 5561 Shields Ave., Lineman	165.00
James I. Barry, 218 S. Western Ave., Lineman	165.00
G. Swearinger, 2328 Monroe St., Lineman	165.00
T. A. Singer, 3718 Grand Ave., Lineman	165.00
Peter Hart, 348 W. 30th St., Groundman	115.00
P. L. Englert, 3038 Wallace St., Groundman	115.00
Total	$ 32,435.10
Grand Total	$ 86,411.02

ADJOURNMENT.

Mr. Paullin moved that the Board adjourn.

The motion prevailed.

L. P. Kipp.

Clerk.

628.69773
C43S

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, AUGUST 7, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll being called, there were:

Present—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Absent—Messrs. Sergel and Littler—Two.

TEMPORARY CHAIRMAN.

President Sergel being absent, Mr. Healy moved that Mr. Paullin act as Chairman of the meeting.

The motion prevailed and Mr. Paullin occupied the chair

BIDS.

The Clerk opened and read the bids received for wrecking and removing power house and tunnel and widening south branch of the Chicago river near Van Buren street and near Sixteenth street, as shown in the schedule on page 926A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the Proceedings of the adjourned meeting of July 14 and the regular meeting of July 17, 1919, be approved as printed without being read.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Chief Engineer for the month of March, 1919, which was ordered published and filed, as follows:

CHICAGO, April 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of March, 1919, giving the detailed operation of the same:

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed no material from the spoil banks of this channel during the month.

Contract for Sloping of Banks.

Byrne Brothers Dredging and Engineering Company, Contractors, assigned this contract to The Great Lakes Dredge and Dock Co. by consent of the Board, see Proc. 1918 Page 1375. Work deferred till Spring, 1919. See report of Engineering Committee November 14th, 1918.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, Contractor, continued operations throughout the month. Dragline No. 2 on the south berm, was engaged in cleaning up channel between stations 3+00 and 2+00 from the 1st to the 3rd. Locomotive crane No. 1 was engaged in cleaning up channel between stations 4+00 and 2+00 from the 5th to the 13th, backfilling, north side, between stations 3+50 and 2+00 from the 20th to the 31st. Drills were engaged in drilling rock in turning basin between stations 4+50 and 2+00 from the 5th to the 8th and 11th to the 13th. Blasting high spots between stations 4+50 and 2+00 was carried on from the 5th to the 8th. The dam at the Main Channel was blasted, on the 28th.

All of the above mentioned work was carried on in one 10-hour shift per day. Pumping channel at station 28+00 from the 1st to the 16th, working two 12-hour shifts per day. The following miscellaneous work was carried on: Building dam at station 67+00 on the 18th. Repairing dam at station 42+00 on the 10th. Dismantle mixer from the 1st to the 16th.

Sections 2 to 12, Inclusive. Pumping Contract.

James O. Heyworth, Contractor, continued pumping channel for these sections from the 1st to the 16th, when the work was suspended.

Section 13.

A. Guthrie & Co., Inc., Contractor, carried on operation of pumping channel as follows:

At station 761+50 on the 17th and 18th, working two 12-hour shifts per day. At station 757+50 from the 14th to 21st, working two 10-hour shifts per day and from the 22nd to 31st, working one 5-hour shift per day. At station 782+00 from the 3rd to the 5th, working one 6-hour shift per day; from the 13th to the 20th working one 9-hour shift per day; from the 21st to the 24th, working two 10-hour shifts per day and from the 25th to the 31st, working one 5-hour shift per day. The following hand work was carried on: Building dams along Stony Creek from Ann street to the Rock Island crossing to prevent overflow into channel, due to heavy rains and spring floods, from the 16th to the 20th,

ANCH OF CHICAGO RIVER

Bids Opened August 7, 1919

In Order Received	In Order of Magnitude		Division B				Grand Total of Divisions A and B
			For ulling 600 Round Piles	For Removing Old Timber Dock 560 Lin. Ft.		Total Cost of Work Under Division B	
			Total	Price per Ln. ft.	Total		
5	1	Great La	$ 4,800.00	$8.00	$ 4,480.00	$68,980.00	$86,980.00
2	2	Fitz-Sim	3,000.00	10.00	5,600.00	77,600.00	
3	1	W. J. Ne	Bid Under Division B				
1	2	American	Bid Under Division B				
4	3	Bosley B	Bid Under Division B				

THE SANITARY DISTRICT OF CHICAGO.

BIDS RECEIVED FOR WRECKING AND REMOVING POWER HOUSE AND TUNNEL AND WIDENING SOUTH BRANCH OF CHICAGO RIVER NEAR VAN BUREN STREET AND NEAR SIXTEENTH STREET.

Bids Opened August 7, 1919

In Order Received	In Order of Magnitude	Name and Address of Bidder		Amount of Deposit	Division A			Division B							Grand Total of Divisions A and B
					For Wrecking and Removing Power-House and Tunnel	Payment for Purchase of Material in Power-House and Tunnel	Net Cost of Wrecking and Removing Power-House and Tunnel	For Dredging 30,000 Cubic Yards (Place Meas.)		For Pulling 600 Round Piles		For Removing Old Timber Dock 560 Lin. Ft.		Total Cost of Work Under Division B	
								Price per Cu.Yd	Total	Price per Pile	Total	Price per Ln. ft.	Total		
5	1	Great Lakes Dredge & Dock Co.	Chicago	$2,000.00	$18,000.00	.....	$18,000.00	$1.99	$59,700.00	$8.00	$ 4,800.00	$8.00	$ 4,480.00	$68,980.00	$86,980.00
2	2	Fitz-Simmons Connell Dredge & Dock Co.	Chicago	1,000.00	No Bid Under Division A			2.30	69,000.00	5.00	3,000.00	10.00	5,600.00	77,600.00	
3	1	W. J. Newman Wrecking Co.	Chicago	$1,000.00	$17,500.00	.....	$17,500.00	No Bid Under Division B							
1	2	American Wrecking & Salvage Co.	Chicago	1,000.00	19,500.00	$ 1.00	19,499.00	No Bid Under Division B							
4	3	Bosley Brothers	Chicago	1,000.00	19,500.00	.....	19,500.00	No Bid Under Division B							

working an average of 12 hours per day. Building dams at Chicago street and Stony Creek to prevent overflow into channel on the 16th and 17th working an average of 10 hours per day. An average daily force of 9 men was employed. At the end of the month 58.5 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Co., Inc., Contractor, continued operations as follows: Steam shovel No. 5, on the north berm was engaged in excavating spoil from the spoil bank between stations 825+00 and 840+00 from the 18th to the 22nd and 25th to 31st, spoil was used for backfilling behind North walls. Three dinky engines and 16 dump cars were engaged in hauling spoil from shovel No. 5 to north wall between stations 837+00 and 842+00 from the 18th to 22nd, and 25th to 31st. Pumping channel was carried on at stations 837+00 from the 1st to the 15th, working one 5-hour shift per day. Team was engaged in hauling cinders to the south approach of Ashland avenue bridge from the 3rd to the 7th. All the aforementioned work was carried on in one 10-hour shift per day, except pumping channel as noted. Hand work was carried on as follows: Protecting Morgan Park sewer from the 15th to the 18th, working one 8-hour shift per day. Repairing drain pipes on Stein property south of channel near Portland street on the 27th and 28th, working one 10-hour shift per day. An average daily force of 27.9 men was employed.

The Sanitary District Organization (Electrical Dept.) employed an average daily force of 8 men, placing poles and stringing wires, north and south of the channel at Ashland avenue on the 12th and 13th, working one 4-hour shift per day.

BRIDGES.

Division Street Bridge.

A. Guthrie & Co. employed an average daily force of 5 men scraping and painting bridge steel from the 7th to the 15th and 18th to the 28th, working one 10-hour shift per day.

C. R. I. & P. Ry. (Main Line) Bridge.

A. Guthrie & Co. employed an average daily force of 7 men, excavating for north piers of bridge Nos. 2 and 3 from the 11th to the 15th and 19th to the 24th. Excavating for north abutment of bridges Nos. 2 and 3 from the 25th to the 31st, working one 10-hour shift per day.

The C. R. I. & P. Ry. Company employed an average daily force of 22 men unloading stringers for trestle on the 1st, placing stringers (north approach trestle) on the 3rd and 4th, working one 9-hour shift per day. A force of 15 men was employed in bracing water pipe line at north abutment on the 17th, working one hour. An average daily force of 5.5 men was employed in bracing temporary trestle, north approach, from the 20th to the 22nd and 31st, working one 8-hour shift per day and working one hour on the 26th.

B. & O. G. T. W. Bridges.

A. Guthrie & Co., Inc., resumed work on the 3rd. Steam shovel No. 3 was engaged in excavating for west half of the south abutment from the 5th to the 13th. Two dinky engines and four dump cars were engaged in hauling spoil from shovel No. 3 to spoil area on south berm between B. & O. Ry. and Ann street from the 5th to the 13th.

Four jack hammer drills were engaged in drilling holes in rock between stations 747+25 and 746+90 from the 24th to the 29th, 88 holes were drilled, an average depth of 12.5 feet or 1100 lineal feet of holes. Pumping channel was carried on at station 749+00 from the 1st to the 13th, work-

ing an average of 8 hours per day, from the 14th to the 27th, working an average of 19 hours per day, and from the 28th to the 31st, working an average of 10 hours per day. Hand work was carried on as follows: Bracing temporary trestle due to undermining caused by excavation for west half of south abutment on the 11th, 12th and 17th and 18th. All the aforementioned work was carried on in one 10-hour shift per day, except wherein mentioned.

The B. & O. Ry. Company employed a force of 2 men in drilling holes in the plates, setting pipe rollers and making concrete blocks for new interlocking system from the 1st to the 26th, working one 8-hour shift per day. An average daily force of 7.5 men in bracing temporary trestle at channel due to undermining caused by excavation of the west half of the south abutment from the 17th to the 31st, working one 8-hour shift per day.

Sewers.

CALUMET INTERCEPTING SEWER.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Co., Contractors, continued the work of repairing the plant throughout the month. The work of backfilling and moving of spoil by shovel and drag line was begun on the 21st and continued through the month. An average daily force of 11 men and 3 teams was employed.

EVANSTON INTERCEPTING SEWER.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work consisted of construction of manholes and other miscellaneous items. An average daily force of 17 men was employed. The work was 99.5 per cent completed at the end of the month.

TEMPORARY PUMPING PLANT AT EVANSTON.

Nash-Dowdle Company continued the operation of pumping throughout the month. An average daily force of 3 men was employed.

DESPLAINES RIVER INTERCEPTING SEWER.

Nash Brothers, Contractors, continued operations throughout the month. The work consisted of construction of main line sewer, in tunnel, in First avenue. An average daily force of 57 men was employed. The work was 17.3 per cent completed at the end of the month.

Pumping Stations.

Calumet Sewage Pumping Station.

T. J. Forschner Contracting Company continued operations throughout the month. The building of forms and repairing of plant was carried on throughout the month. The placing of concrete in the sub-structure of the station was resumed on the 26th and carried on intermittently through the balance of the month. An average daily force of 43 men was employed.

Evanston Sewage Pumping Station.

Nash-Dowdle Company, Contractors, continued operations throughout the month. Excavation for the station was continued throughout the month. The placing of concrete in the floor and wall at the north end of the station was begun on the 23rd and carried on intermittently through the balance of the month. An average daily force of 23 men was employed. At the end of the month the work was 11.5 per cent completed.

Sewage Treatment Plant, North Branch of the Chicago River.

The Sanitary District Organization employed a force of 3 men, throughout the month, constructing weirs in the sewer outlets at Blackhawk street, Diversey boulevard, Belmont avenue, Irving Park and Montrose boulevard. Considerable difficulty was encountered in this work due to a heavy rain on the 15th washing away some of the weirs and damaging others.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Bridges.

The Sanitary District Organization employed a force of men repairing the roadway floors of the Willow Springs, 16th street, Lemont, Romeo, and Summit bridges.

The hand rails and guard rails of the Summit Road bridge were painted.

Controlling Works.

The Bear Trap Dam was open some part of five days or a total of thirty hours and eight minutes, an average of fifty-eight minutes for each day of the month.

MAIN CHANNEL EXTENSION.

Bridges.

The Sanitary District Organization made repairs to the indicator machinery and the floor of the 9th street bridge. Repairs were made to the gears of the 9th street bridge on the 9th. Two men were on duty on the 9th and 16th streets bridges, working from 7 A. M. to 3 P. M. and 3 P. M. to 11 P. M.

Butterfly Dam.

This dam was operated on the 2nd, 9th, 16th, 23rd, and 30th. An arc lamp globe was put in on the 11th.

Dams at the Power House.

The Forty-Eight Foot Dam was open some part of nine days or a total of forty-one hours and ten minutes, an average of one hour and twenty minutes for each day of the month. The Twelve Foot Dam was open some part of one day or a total of three hours and twenty-five minutes, an average of seven minutes for each day of the month.

The switches in the dam house were repaired on the 1st. Three men were on duty working shifts of 8 hours each, throughout the month. Samples of the canal water were taken for the Sanitary Division every eight hours.

I. & M. Canal Lock at the Power House.

No boats passed through the lock during the month and no one was on duty at the lock. The heater was repaired on the 8th, 14th, 17th and 29th.

DESPLAINES RIVER IMPROVEMENT.

Bridges.

The Sanitary District Organization carried on a small amount of repair work on the 9th street bridge during the month.

NORTH SHORE CHANNEL.

Channel.

The Sanitary District Organization employed a force of 5 men on the work of repairs to Outfalls and ditches from the 27th to the end of the month.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of eight days or a total of one hundred and twelve hours and thirty minutes. Pump No. 2 some part of four days or a total of thirty-one hours and thirty-five minutes. Pump No. 3 some part of three days or a total of forty-one hours and thirty minutes. Pump No. 4 some part of thirty-one days or a total of six hundred and ninety hours and forty-five minutes. Screw pump No. 5 was operated some part of one day or a total of two hours and fifteen minutes. The five pumps were operated for a grand average of five hours and thirty-nine minutes for each day of the month and pumped an average of ten thousand four hundred and thirty-four cubic feet of sewage for each minute of the month.

Fresh water pump was operated some part of two days or a total of two hours and forty-eight minutes, an average of five minutes for each day of the month, and pumped an average

of one hundred and two cubic feet of water for each minute of the month.

On the fifteenth day of the month during a heavy rain, screw pump No. 5 was operated two hours and fifteen minutes pumping sewage.

The following maintenance work was carried on during the month. The coal conveyor broke on the 1st, repairs were made and it was back in service on the 3rd. The plant was shut down four hours on the 7th on account of trouble with the boiler feed pump. The ash conveyor was overhauled on the 12th. The plant was shut down four hours on the 19th to pack valves and put in new gaskets in main steam line. The gate windlass was overhauled between the 25th and 29th.

Lawrence Avenue Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of two days or a total of five hours and forty minutes. Pump No. 2 some part of fifteen days or a total of two hundred and ninety-six hours and twenty-four minutes. Pump No. 3 some part of twenty-four days or a total of four hundred and seventy hours and twenty minutes. Screw pump No. 4 some part of one day or a total of three hours.

The four pumps were operated for a grand average of six hours and fifteen minutes for each day of the month, and pumped an average of five thousand seven hundred and forty-two cubic feet of sewage for each minute of the month.

On the fifteenth day of the month during a heavy rain, screw pump No. 4 was operated three hours pumping sewage.

The following maintenance work was carried on during the month. Boiler No. 1 was turbined on the 7th. Repairs were completed on this boiler and it was inspected by the City Boiler Inspector on the 27th. Boiler No. 2 was inspected by the City Boiler Inspector on the 19th. The overhauling of sewage pumping unit No. 1 begun on February 17th, was completed on the 25th. Repairs to the break on the coal conveyor on the 24th were not completed up to the end of the month. On the 15th a heavy rain taxed the capacity of the station, pump No. 1 being out of service at the time. The other two pumps could not handle all the sewage and the fresh water pump was used for three hours pumping sewage.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The pumps were operated as follows:

Pump No. 1 was operated some part of fifteen days or a total of two hundred and eighty-eight hours and fifty minutes. Pump No. 3 some part of nineteen days or a total of two hundred and ninety-seven hours and fifty-five minutes. Pump No. 4 some part of eighteen days or a total of two hundred and ninety-two hours and forty-eight minutes. The three pumps were operated for a grand average of eight hours and twenty-three minutes for each day of the month, and pumped and average of one thousand three hundred and eighty-three cubic feet of water for each minute of the month. Pump No. 2 was shut down the entire month.

STRUCTURES AND EQUIPMENT FOR SANITARY IMPROVEMENTS AND SPECIAL INVESTIGATIONS.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation superintended by the Sanitary Division.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main

Channel and from the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on samples from Lockport.

Laboratory force working up back data on Main Channel and Illinois River.

Sewer and Rain Gages.

A sewer gage was operated on Davis street in Evanston. Rain gages were operated at the 39th street Pumping Station, Stock Yards testing station, Lockport, Kensington and 31st and Western avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th street and from the Main Channel at Lockport. Weekly samples from the Main Channel at Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Drafting Division.

The following work was carried on during the month: The reducing of the Stock Yards map was completed, and a tracing made. Posting dates and document numbers of recorded easements in Calumet Sewer Atlas. Plotting additional notes on section 1 Calumet Intercepting Sewer. Preparing contract drawings for section 1 Calumet Sewer. Work was begun on the Des Plaines River Intercepting Sewer Atlas. Work on Calumet-Sag Atlas and Chicago River Atlas was continued. Revising index system and indexing and filing maps and plans. Checking Cook County Tax Exemption lists. Computing co-ordinates for North Branch Survey. Preparing plat of sewer inlets in Calumet Sewer along Blue Island and Riverdale Road, west of Halsted street. Setting up and printing titles on Des Plaines River Sewage Treatment Plant contract drawings. Copying records at City Hall and County Building. Printing index cards. Tracing subdivision map of part of Joliet, Bannon Overflow case. Checking lists of outstanding field books.

Bridge Division.

Work was continued on detail of reinforced concrete work for the Calumet Sewage Pumping Station and structural steel work for the Des Plaines Sewage Pumping Station and Evanston Sewage Pumping Station. A design was made for a temporary trestle for supporting the Grand Trunk Western Railway tracks at the Calumet-Sag Channel. A preliminary design was made for a bascule bridge across the Main Channel at Crawford avenue. Comparative estimates of the cost of different types of bascule bridges for this site were made.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Des Plaines River treatment works was continued and conferences held with the village officials. The preparation of supplementary plans for the Calumet pumping station was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed re-arrangement of the 95th street pumping station.

The preparation of plans for the storm overflow to the Calumet River at Wildwood was continued. Studies were continued on our auxiliary generator station at the Calumet Sewage Pumping Station, to be run by oil engines. Conferences were held with various parties from the Calumet Region in Indiana over proposed

schemes for sewage diversion and treatment.

An inspection was made of the pumping stations, both water and sewage, the municipal docks and industrial canal at New Orleans, the Imhoff tanks at Dallas. The two activated sludge plants and cement plant with Diesel engines at Houston; The drainage pumps at Memphis and the sewerage of San Antonio.

Hydraulic Measurement Division.

The self-recording gages on the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records from the gages were worked up in the office.

Field Parties.

Party was employed on the Chicago River Dredging and Docking. North Shore Channel Sloping. North Shore Channel on account high water. Des Plaines River on account high water. Sewer Department on weir construction. Survey of North Branch. Wall repairs Main Channel.

The Calumet-Sag Field parties performed the usual routine construction duties as follows: The Sag Division on Section 1; the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet sewers and of the Calumet-Sag Channel sections. Keeping the accounts of the department, preparing vouchers, furnishing information for other departments, and performing other necessary duties, etc.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Judiciary.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary respectfully reports that it has been advised by the Attorney that the suit of John Griffiths, surviving partner of the firm of John Griffiths and Michael McDermott, co-partners doing business as Griffiths & McDermott v. The Sanitary District of Chicago, pending in the Circuit Court of Cook County, Illinois, as Gen. No. 181343, is an action brought by said co-partners to recover for alleged extras in connection with the construction of Section 1 of the Main Channel; that the declaration in said suit was filed on April 7, 1898; that subsequently said declaration was amended; that the total amount claimed was $150,000.00; that said cause was tried before a court and jury in the year 1910, which trial began on May 18th and extended to June 13th of that year and resulted in a judgment for the plaintiffs against the District for $6,000.00; that the plaintiffs appealed from said judgment to the Appellate Court, and the opinion of that court is reported in Volume 174 of the Illinois Appellate Court Reports at pages 100 to 116; that said cause was reversed and remanded for a new trial; that while the bill for extras presented by the plaintiffs amounted to $117,000.00, some of the items were passed upon adversely to the plaintiffs by the Appellate Court; that the items of alleged extras now involved in the pending retrial of this case amount to about $60,000.00; that the testimony at the first trial was voluminous, amounting to 2,300 typewritten pages, exclusive of exhibits; that some of the witnesses are dead; that so much time has elapsed that it will be inadvisable to again try this case before a court and jury and to

rely upon the testimony of former witnesses now living, and that such procedure would involve a very large additional expense, which, in the opinion of the Attorney and your Committee, is not advisable.

Your Committee further reports it is advised by the Attorney that a large amount of time and attention has been given by the Law Department to this case for the purpose of retrying the same upon the former record before the court without a jury, with the privilege extended to the plaintiffs and defendant to introduce certain additional evidence and to interpose additional objections, exceptions and motions with reference to testimony taken at the former trial; that as a result of such study and preparation, a stipulation has been prepared, and signed by the attorneys for the plaintiffs in said cause, which stipulation is set forth in the accompanying order; that the Attorney for the District desires the authority of the Board to sign said stipulation and to proceed in accordance therewith as to the retrial of said cause.

Your Committee having considered the foregoing matters, and being fully advised in the premises, recommends the passage of the following order:

Ordered, That the Attorney be, and he is hereby authorized and directed to sign the following stipulation and agreement in said cause, which stipulation has already been signed by Sims, Welch & Godman, attorneys for said plaintiff:

1. That a jury is hereby waived in the above entitled cause by the parties hereto and that said cause is hereby submitted to the Hon. Oscar E. Heard, Judge of said Court, for trial without the intervention of a jury.

2. That, in order to expedite the trial of said cause, and to avoid needless expense, said cause shall be submitted upon the bill of exceptions filed therein on the 4th day of October, 1910, together with the following:

(a) The letter dated June 27, 1894, written by Isham Randolph, Chief Engineer, to Griffiths & McDermott, a copy of which is hereto attached marked "Exhibit A."

(b) That Chief Engineer Randolph signed all original estimate vouchers, copies of which appear in said bill of exceptions as plaintiff's Exhibits 4 to 81, both inclusive.

(c) Elevations of off-sets in walls at various points as ascertained by William Sullivan.

(d) The number of lineal feet of off-sets constructed in each month prior to September 11, 1896.

(e) A view by the Court of the walls in question, together with the premises and structures adjacent thereto, and such other portions of the Main Channel as the court may desire to view.

(f) Fourteen photographs of portions of the walls of the Main Channel of The Sanitary District of Chicago, all marked on their face "Sep 26, 17" and numbered consecutively on their face from 6212 to 6225, both inclusive.

(g) Eight photographs marked plaintiff's Exhibits A to H, 7/26/19, both inclusive.

3. Each party shall have and hereby reserves, in addition to all the objections and motions made and exceptions taken by such party upon the former trial of said cause, as shown by said bill of exceptions, the right to make such further and other objections to the testimony and exhibits, or any part or parts thereof, contained in said bill of exceptions and to make any and all motions in relation thereto, as such party may hereafter determine, and to take and preserve exception or exceptions to any ruling

thereon by the court upon the retrial of said cause.

Respectfully submitted,
WM. J. HEALY,
Chairman.
GEORGE W. PAULLIN,
PATRICK J. CARR,
Committee on Judiciary.

I recommend the adoption of the foregoing report and passage of the accompanying order.

C. ARCH WILLIAMS,
Attorney.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Mueller, Nance and Paullin—Six.

Nays—None.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary respectfully reports that on the 14th day of March, 1900, the then Committee on Engineering presented to the Board a report with reference to, and accompanied by, a voucher in favor of Griffiths & McDermott, contractors for the foundations of the Bear Trap Dam and collateral works near Lockport, Illinois, in the sum of $4,063.65, being for compensation for extra labor and materials furnished in connection with said work, said voucher being accompanied by an itemized statement of claims for extra compensation aggregating said amount. The report recommended that a voucher be authorized in the sum of $4,063.65 to said Griffiths & McDermott on condition that said contractors furnish a receipt and release to the District in full of all claims and demands on account of said work. On roll call the motion was lost, there having been four votes in the affirmative and two votes in the negative. Motion was then and there made that Griffiths & McDermott be paid the amount of the award made by the Chief Engineer, which motion was declared lost, there having been three votes in the affirmative and three votes in the negative. (See Proceedings 1900, pages 6338-6339.)

On July 11, 1900, on motion that the action of the Board at the meeting of March 14, 1900, in reference to this matter of extra compensation to Griffiths & McDermott under the contract for the foundations of the Bear Trap Dam and collateral works near Lockport, Illinois, be rescinded, and that the amount shown to be due said contractors by the Chief Engineer, viz., $4,063.65, be paid, the roll call showed five votes in the affirmative and four votes in the negative, and the President declared the motion carried.

By unanimous consent, the opinion of the Attorney in reference to this matter was printed in the Proceedings. This opinion advised the Board in substance, that by virtue of the authority given the Chief Engineer in the contract between the District and Griffiths & McDermott, dated June 21, 1897 (Proceedings 1897, page 4070), the Chief Engineer made the award or finding in question; that in the absence of fraud or gross mistake, the action of the Chief Engineer, when proceeding under such authority, is final and conclusive upon both parties to the agreement; that there is no language in the contract to the effect that the contractor shall give any receipt whatsoever for moneys due him under and by virtue of the terms and conditions of the contract or award of the Chief Engineer; that the award of the Chief Engineer being binding upon the Board as well as upon the contractor, it necessarily follows that there is due the contractor the sum mentioned by the Chief Engineer, and that no receipt in full of all claims and demands could be required as a con-

dition precedent to the payment of the sum admitted to be due. (Proceedings 1900, pages 6663-6664.)

Your Committee further reports that pursuant to said order, warrant No. 13808 was drawn under date of July 11, 1900, for the sum of $4,063.65 to the order of Griffiths & McDermott, signed by the President of the Board of Trustees, and the Clerk, payable at the Chicago National Bank, countersigned by S. P. Blount, Assistant Treasurer, and that voucher No. 13808 for said sum of money was likewise prepared and approved by the Chief Engineer; that said warrant was never accepted by Griffiths & McDermott, or was said voucher ever signed, and that said warrant and voucher are now in possession of the Clerk of the District.

Your Committee further reports that on March 30, 1900, suit was brought in the Circuit Court of Cook County, Illinois, by the Griffiths & McDermott Construction Company, a corporation, against The Sanitary District of Chicago, to recover for certain extras in connection with the construction of the Bear Trap Dam, the amount sued for being $60,000.00, and that a bill for extras was filed showing a total claimed of $50,083.37, which suit is still pending as Gen. No. 205704.

Your Committee further reports it is advised by the Attorney that the trial of said cause has been postponed pending the final determination of another suit brought by Griffiths & McDermott referred to in a previous report of your Committee this day presented.

Your Committee further reports it is advised by the Attorney that the Law Deparment has been negotiating with the attorneys for the Griffiths & McDermott Construction Company, with a view to finally adjusting and disposing of said case No. 205704, and that the plaintiff is now willing to receive and accept said sum of $4,063.65 in full settlement, satisfaction and discharge of all of its claims and demands, and to dismiss said suit without costs to either party, and that the attorneys for the Griffiths & McDermott Construction Company have signed a stipulation to that effect as shown in the accompanying order.

Your Committee having fully considered the foregoing facts, recommends the passage of the following order:

Ordered, That said warrant No. 13808, dated July 11, 1900, for the sum of $4,063.65, payable to the order of Griffiths & McDermott be, and the same is hereby cancelled, and that, in lieu thereof, the Chairman of the Committee on Finance and the Clerk be, and they are hereby authorized and directed to draw a new warrant No. 13808, for the said sum of $4,063.65 in favor of the Griffiths & McDermott Construction Company, a corporation (with whom the contract for said construction work was made (Proceedings 1897, pages 3992-3993), plaintiff in the case of Griffiths & McDermott Construction Company v. The Sanitary District of Chicago, pending in the Circuit Court of Cook County, Illinois, as Gen. No. 205704, and to deliver said warrant to said Griffiths & McDermott Construction Company in full settlement, satisfaction and discharge of all claims and demands of every character of said Griffiths & McDermott Construction Company, a corporation, including all compensation for extra or additional labor and materials arising out of or by reason of the construction of the foundations of the Bear Trap Dam and collateral works near Lockport, Illinois; and it is further

Ordered, That the estimate voucher No. 13808, for the sum of $4,063.65, on which said warrant No. 13808 was erroneously issued to Griffiths & McDermott, be corrected on its face by the Clerk of the District by substituting the name of Griffith & McDermott Construction Company for the name of Griffiths & McDermott wherever said name ap-

pears on said voucher; and it is further

Ordered, That upon the payment of said sum and the execution and delivery by said Griffiths & McDermott Construction Company to the District of a receipt and release in proper form satisfactory to the Attorney for the District, the Attorney is hereby authorized and directed to sign a stipulation agreeing therein that said suit shall at once be dismissed without costs to either party.

Respectfully submitted,

WM. J. HEALY,
Chairman.
GEORGE W. PAULLIN,
PATRICK J. CARR,
Committee on Judiciary.

I recommend the adoption of the foregoing report and passage of the accompanying orders.

C. ARCH WILLIAMS,
Attorney.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Healy presented the following report from the Committee on Judiciary:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Judiciary respectfully reports that Joseph J. Duffy filed a bill for an accounting against The Sanitary District of Chicago in the Circuit Court of Cook County, Illinois, on January 29, 1908, which suit is still pending and known as General Number 283,054; that after the case was at issue it was referred on July 17, 1908, to a Master in Chancery of that court to take evidence and make report thereon; that later on by order of court the reference was limited to the effect that the Master should hear the evidence and report merely upon the question of whether complainant was entitled to an accounting; that a large amount of testimony was taken and the Master made a report thereon in October, 1912, in which he recommended that among other things a decree be entered directing the Sanitary District to render an account to the complainant; that on November 12, 1912, the Circuit Court entered a decree finding that the Sanitary District must be held to account to the complainant as his Trustee and the case was re-referred to the same Master to state an account; that pursuant to this decree the Sanitary District filed its itemized account on December 23, 1912; that approximately 17,000 pages of testimony were taken before said Master and the exhibits offered in evidence comprised 1,500 pages, and many of these exhibits comprised a large number of separate items; that the taking of this testimony covered the greater part of the time for a period of nearly three years, during which two or more members of the Law Department of the Sanitary District were occupied with this case, and in addition thereto the time of investigators of the Law Department was largely given to this matter; and a very large amount of time of the Engineers of the Sanitary District was also given to this case in appearing as witnesses before the Master; that the proofs were finally closed before the Master on August 16, 1915, and after a lengthy argument the Master prepared his first draft of report, dated December 1, 1915, finding in effect that the Sanitary District was indebted to the complainant for about $1,200,000.00; that said Master prepared another draft of report on January 8, 1916, and the final draft of report was dated March 8, 1916, in which the Master found that the Sanitary District on one theory was indebted to the complainant in the sum of $714,926.50, and on the

other theory in the sum of $500,926.88; that so far as the records of the Circuit Court show this last draft of report has never been filed and said Master's term has expired.

Your Committee further reports that in May, 1916, the complainant, Joseph J. Duffy, departed this life, leaving surviving him his widow, Julia V. Duffy and eight children, six of whom were minors; that thereafter the estate of Joseph J. Duffy, deceased, was admitted to probate in the Probate Court of Cook County, Illinois, and letters of administration were issued from said Court to said Julia V. Duffy as Administratrix of the estate of said Joseph J. Duffy, deceased, which estate is pending and undetermined.

Your Committee further reports that during the past year propositions of settlement have been made to the Sanitary District by the attorneys and representatives of the estate of said Joseph J. Duffy, deceased, to settle said cause; that the first proposition of settlement was for the sum of $497,327.43, which proposition was not entertained by the Trustees or by your Committee; that later on a second proposition was made to settle for $250,000.00, which also was given no consideration. The third proposition was made to settle for $193,500.00, which was likewise declined; that in the month of May, 1918, another proposition was made to your Committee to settle said cause for the sum of $135,000.00, which was not accepted.

Your Committee further reports that a proposition of settlement in writing under date of August 5, 1919, was submitted through your Committee to the Board of Trustees of the Sanitary District signed by Thomas H. Cannon, attorney for the estate of Joseph J. Duffy, deceased, now pending in the Probate Court of Cook County, Illinois, and Edwin Hedrick, the attorney who represented the complainant Duffy in the bringing of said suit and in the conduct of the trial thereof, which written proposition is hereto attached. In this proposition request is made upon the Board of Trustees of the Sanitary District to settle said cause for the sum of $125,000.00, in full payment of all claims and demands on the part of the complainant in said suit and the estate of said Joseph J. Duffy, deceased, and out of said sum all court costs and expenses of said suit, including the Master's fees, and all claims against the estate of Joseph J. Duffy, deceased, are to be paid in full or compromised and settled for such sums as are agreeable to such claimants, so as to absolutely release and absolve the Sanitary District from any and all liability by virtue of any such claims or any claims or demands arising out of the subject matter of said suit.

Your Committee further reports that upon petition of said Administratrix the Probate Court of Cook County has entered an order in the estate of Joseph J. Duffy, deceased, authorizing said Julia V. Duffy as Administratrix of said estate to compromise and settle said suit with the Sanitary District for the sum of $125,000.00 as aforesaid.

Your Committee further reports that at its direction the Law Department of the Sanitary District has prepared and filed with your Committee a full and complete report upon the history of this case, the issues involved, the present status of the case and future procedure, and the expense in connection therewith in the event that said suit shall not be compromised, but shall be prosecuted to a conclusion and finally reviewed by the Supreme Court of Illinois; that your Committee is advised by the Law Department that in view of the fact that the term of the Master in Chancery who heard the testimony in this case has ex-

pired and that his report is not on file, said cause can only be tried to a conclusion by either taking all of said testimony before another Master of said court or by having another Master of said court try said cause upon the testimony already taken, which can only be done by stipulation and agreement of the parties to said suit; that in the event of such procedure the time of at least two members of the Law Department of the Sanitary District will be occupied with this case for many months and the expense in connection therewith would approximate the sum of $50,000.00 even though the ultimate decision of the court should be in favor of the Sanitary District upon all issues involved. The record is so voluminous and the disputed items are so many that it appears from the report of the Law Department that in any event there is a probability that some of the claims involved would be ultimately allowed as against the Sanitary District, so that it appears from the record in this case and from the report made to your Committee by the Law Department that the proposition made to the Sanitary District to settle this cause for the sum of $125,000.00 is fair and reasonable, because it seems probable that if this case be prosecuted to a conclusion, the total future expense to the Sanitary District in connection therewith, plus the claims which may probably be allowed against the Sanitary District, would in the aggregate exceed the amount of this proposed settlement.

Your Committee having duly considered the foregoing proposition of settlement and the report of the Law Department thereon, and the recommendation of the Attorney that said proposition be accepted and that said cause be settled on the terms and conditions aforesaid, respectfully recommends the adoption of the following order:

Ordered, That the proposition of the Administratrix of the estate of Joseph J. Duffy, deceased, to compromise and settle the said suit of Duffy vs. the Sanitary District, now pending in the Circuit Court of Cook County, Illinois, as General Number 283,054, for the sum of $125,000.00 be, and the same is hereby accepted on condition that same is in full settlement of all claims and demands of the complainant in said cause and of the Administratrix of the estate of Joseph J. Duffy, deceased, and of all claims and demands arising out of or pertinent to said suit and said estate, and all mechanic's lien claims and assignments of which notice has been given to the Sanitary District, and provided that out of said sum of money shall be paid all unpaid court costs and Master's fees in said suit; and it is further

Ordered, That the Chairman of the Committee on Finance of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant in the sum of $125,000.00, payable to Julia V. Duffy, Administratrix of the estate of Joseph J. Duffy, deceased, and deliver the same to her upon the execution and delivery to the Sanitary District of all releases, waivers of liens, if any, and other documents satisfactory to the Attorney of the Sanitary District, which in his opinion are proper and necessary to completely absolve the Sanitary District from any and all liability to Julia V. Duffy, Administratrix of the estate of Joseph J. Duffy, deceased, who has been substituted as complainant in said suit, and to said estate and to all persons interested therein as claimants or otherwise, and to assignees of complainant, and upon the entry of a final Decree in said suit in form and substance satisfactory to the Attorney of the Sanitary District.

Respectfully submitted,

WM. J. HEALY,
Chairman.

GEORGE W. PAULLIN,
PATRICK J. CARR,
Committee on Judiciary.

Mr. Healy moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that bonds of The Sanitary District of Chicago to the amount of one hundred six thousand ($106,000.00) dollars will mature September 1, 1919.

Your Committee further reports that the semi-annual interest on the twentieth issue of bonds of the Sanitary District, amounting to eight thousand eight hundred ($8,800.00) dollars, will fall due September 1, 1919, and that the semi-annual interest on the twenty-eighth issue of bonds of the Sanitary District, amounting to the sum of thirteen thousand ($13,000.00) dollars, will fall due September 1, 1919.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby authorized to draw a warrant payable to the order of the Treasurer of the Sanitary District for the sum of one hundred twenty-seven thousand eight hundred ($127,800.00) dollars, to pay the principal and semi-annual interest due September 1, 1919, on the bonds of the Sanitary District as follows:

The principal of 56 bonds of the 20th issue numbered 30151 to 30206, both inclusive	$56,000.00	
The principal of 50 bonds of the 28th issue numbered 351 to 400, both inclusive	50,000.00	
Total bonds		$106,000.00
Six months' interest on $440,000.00 of the 20th issue of bonds at 4 per cent per annum.	$ 8,800.00	
Six months' interest on $650,000.00 of the 28th issue of bonds at 4 per cent per annum.	13,000.00	
Total interest		21,800.00
Total principal and interest		$127,800.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Lawley, Mueller, Nance and Paullin—Six.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year

1919 (page 141 of the Proceedings), sets up in the Department of Police (Item 2) five positions with salaries attached thereto, aggregating the sum of $8,100.00.

Your Committee further reports that the Committee on Employment has requested that the salaries attached to said positions be adjusted to meet the requirements of the Department of Police, which can be done without increasing said sum of $8,100.00 heretofore appropriated.

Your Committee having considered said request, is of the opinion that same should be granted and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make adjustments of the salaries set up under the Department of Police in the Appropriation Bill for the year 1919 in accordance with the requirements of the Committee on Employment as follows:

DEPARTMENT OF POLICE—ACCOUNT No. II.

SALARIES AND WAGES OF REGULAR EMPLOYES.

Change from:	
Sergeants, 5 at $1,620.00	$8,100.00
to	
Sergeants, 3 at $1,680.00	$4,860.00
Sergeants, 2 at rate of $135.00 per month	2,598.87
Engineer (to operate police boat), 5 mo., 4 days, at $125.00 per month	641.13
	$8,100.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has had under consideration the question of paying to Byrne Bros. Dredging & Engineering Company current voucher No. 27 in the sum of $1,223.14 for work performed by said company in the construction of the Calumet intercepting sewer contract, Section No. 6, under its contract with the Sanitary District dated June 29, 1916 (page 903 of the Proceedings).

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that by the terms of said contract the entire work should have been completed on or before May 1, 1918, but certain questions relating to delays in the performance of said work have not yet been determined. That the work is completed except as to certain items of repairs and cleaning the site of the work, but the reserve percentage retained by the Sanitary District under said contract is sufficient to protect the rights of the Sanitary District if said payment is made.

Your Committee further reports that said contractor also entered into a contract with the Sanitary District dated June 29, 1916 (page 864 of the Proceedings), for the construction of the Calumet intercepting sewer contract, Section No. 5, and is behind in the progress of said work, and your Committee is of the opinion that said payment of $1,223.14 should only be made to said contractor on condition that the sureties on the bonds of said contractor for the faithful

performance of each of said contracts consent thereto in writing, and your Committee, therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant in the sum of $1,223.14, payable to the order of Byrne Bros. Dredging & Engineering Company and deliver the same to said company on the receipt of the voucher therefor, provided the United States Fidelity & Guaranty Company, as surety on the bond of said contractor for the faithful performance of its contract for the construction of said contract, Section 6, and also as surety on the bond of said contractor for the faithful performance of its contract for the construction of contract, Section 5, of said intercepting sewer, consents in writing that said payment may be made and that all the conditions and terms of both said contracts shall remain in full force and effect.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received request from the Chief Engineer to make transfer of funds from various unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which no appropriation has been made and to increase certain appropriations.

Your Committee having considered the matter is of the opinion that said request should be granted and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make the following transfers in appropriations for the year 1919, in accordance with the request of the head of the Department of Engineering, attached hereto:

DEPARTMENT OF ENGINEERING.

From Account No. 29-64—Repair and replacement service for channels, ditches, reservoirs and docks	$15,700.00
To the following accounts:	
No. 29-529—Repair and replacement service to portable plant equipment, N. O. C.	500.00
No. 29-5273—Repair and replacement service to floating equipment	5,000.00
No. 451—Building and cabinet making parts	500.00
No. 641 H 212—Clearing and doing special work on Calumet-Sag ditches	9,750.00
	$15,700.00
From Account No. 403—Building and street surfacing materials	$18,000.00
To Account No. 404—Lumber	18,000.00
From Account No. 62 H 7—Rock Island connecting track bridge, Calumet-Sag Channel	1,000.00
To Account No. 62 H 10—Western avenue bridge, Calumet-Sag Channel	1,000.00

From Account No. 65 M 2556—
Calumet intercepting sewer,
Contract No. 5..... 1,467.74
To Account No. 65 M 2456—
Calumet intercepting sewer,
Contract No. 4..... 1,467.74

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received request from the Clerk of the District to make transfer of funds from an unexpended account to another account in order to provide funds for the payment of expenditures for which no appropriation has been made.

Your Committee having considered the matter, is of the opinion that said request should be granted and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make the following transfer in appropriations for the year 1919, in accordance with the request of the head of the Department of the Clerk of the District, attached hereto:

DEPARTMENT OF CLERK OF THE DISTRICT.

From Account No. 86—Judgments and claims.....$8,000.00
To Account No. 13—Compensation for personal services other than salaries and wages—
"For classification of the employment of all employes of the Sanitary District"... 8,000.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
GEO. W. PAULLIN,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Chief Engineer transmitting a request from the Schillinger Construction Company, that the penal sum of its bond furnished for the faithful performance of its contract, dated May 17, 1917 (page 774 of the Proceedings), for the construction of concrete slabs for the floors of the Chicago, Rock Island & Pacific Railway bridges across Stony Creek in Blue Island, be reduced from $2,000.00 to $1,200.00. The Chief Engineer states that the work under said contract was to be fully completed in the fall of 1917, but that the erection of the bridges on which said slabs were to be placed was delayed by war conditions to such an extent that the Sanitary District has been unable to accept said slabs from said Schillinger Construction Company, and

because of lack of space the said company has not fully completed said contract. The Chief Engineer further states that this delay on the part of the Sanitary District has resulted in an increased cost to the contractor in keeping said bond in force and he recommends that the request of said contractor be granted and said bond reduced from $2,000.00 to $1,200.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the bond of the Schillinger Construction Company, furnished with its contract dated May 17, 1917 (page 774 of the Proceedings), for the construction of concrete slabs for the Chicago, Rock Island & Pacific Railway bridges over Stony Creek in Blue Island be, and the same is hereby reduced from $2,000.00 to $1,200.00, provided the surety on said bond consents in writing to said reduction and that all the other terms and conditions of said bond remain in force and effect.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
GEO. W. PAULLIN,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (page 127 of the Proceedings), sets up in the Department of Illinois and Michigan Canal and Illinois River Conditions (Item 8), one position with salary attached thereto in the sum of $1,500.00.

Your Committee further reports that the Committee on Employment has requested that the salary attached to said position be adjusted to meet the requirements of the Department of Illinois and Michigan Canal and Illinois River Conditions, which can be done without increasing said sum of $1,500.00 heretofore appropriated.

Your Committee having considered said request, is of the opinion that same should be granted and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to make adjustment of the salary set up under the Department of Illinois and Michigan Canal and Illinois River Conditions in the Appropriation Bill for the year 1919 in accordance with the requirements of the Committee on Employment as follows:

DEPARTMENT OF ILLINOIS AND MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS—ACCOUNT NO. 11.
SALARIES AND WAGES OF REGULAR EMPLOYES.

Change from:

Stenographer, at $1,500.00	$1,500.00
to	
Stenographer, 1 at rate of $125.00 per mo.	$800.81
Photographer, 1 for 4 months, 27 days at rate of $150.00 per month	699.19
	$1,500.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
GEO. W. PAULLIN,
MATT A. MUELLER,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 7, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of July, 1919.

L. F. King, Clerk (general payroll)		$ 29,797.74

Construction Account.

L. F. King, Clerk (gas service)	$ 23.12	
Nash Bros. (work on Desplaines river intercepting sewer)	42,373.24	
A. B. Wood (fees for preparation of plans and specifications for Desplaines river sewage treatment plant)	5,000.00	
Jas. O. Heyworth (work on Section 1, Calumet-Sag Channel)	4987.50	
A. Guthrie & Co. (labor and material building trestle north and south of B. & O.)	3,763.50	
A. Guthrie & Co. (labor and material building trestle north and south of B. & O.)	2,055.75	
A. Guthrie & Co. (unloading and spreading cinders)	350.04	
Leyden-Ortseifen Company (work on Desplaines river sewage treatment works)	36,852.41	
Nash-Dowdle Company (work on Evanston Intercepting sewer)	3,651.07	
Chicago, Rock Island & Pacific R. R. (material furnished for construction of main line bridge)	1,295.75	
Knickerbocker Roofing & Paving Company (waterproofing the floor, main line bridge, Calumet-Sag Channel)	821.60	
E. A. Hanrahan (cleaning Tinley creek)	495.00	
E. A. Hanrahan (cleaning south ditch south of Tinley creek)	420.00	
E. A. Hanrahan (removing levee west of Tinley creek)	265.00	
Chicago Bridge & Iron Company (shortening four end panels of hand railing on Western Ave. bridge)	54.05	
American Steel & Wire Company (concrete reinforcement)	18.03	
L. F. King, Clerk (expenses of employe)	3.00	
L. F. King, Clerk (expenses of employe)	1.54	
Illinois Central R. R. Company (labor and material)	2,779.63	
Overland Construction Company (moving floor slabs at Bridge No. 3)	375.00	
Fred Klein Company (printing)	118.75	
Yunkes Construction Company (moving charges)	100.00	
C. C. Wagner, Jr. (sewer pipe)	75.60	
John E. Burns Lumber Company (lumber)	67.84	
John E. Burns Lumber Company (lumber)	6.48	
Chicago & Alton R. R. Company (rental)	58.34	
Modjeski & Angier (inspection charges)	54.06	
Thornton-Clancy Lumber Company (lumber)	52.08	
Amounts carried forward	$106,118,38	$ 29,797.74

Amounts brought forward	$106,118.38	$ 29,797.74
Nash Bros. (labor and material)	48.68	
Barrett Hardware Company (washers, etc.)	45.98	
Geo. B. Carpenter & Co. (spikes and chains)	43.28	
Adam Schillo Lumber Company (lumber)	34.18	
A. Guthrie & Co. (material)	26.16	
McCallum & Clark (rent)	25.00	
Thornton-Clancy Lumber Company (lumber)	24.44	
Otley Paint Mfg. Company (paint)	23.63	
Augusta Schwarz (rent)	22.00	
The Frederick Post Company (board and cleats)	21.70	
Orrin Eames (rent)	20.00	
The Chicago Evening Post Company (advertising)	18.00	
The Chicago Evening Post Company (advertisement and 50 proofs)	9.20	
Keuffel & Esser Company (level rod and band chain)	13.67	
Keuffel & Esser Company (tapes)	9.22	
Keuffel & Esser Company (tape)	5.72	
Keuffel & Esser Company (triangles)	3.09	
C. E. Reading (coal)	12.70	
Alward-Anderson-Southard Company (wall tent)	12.00	
Stebbins Hardware Company (shovels, etc.)	10.42	
John A. Roeblings Sons Company (galvanized sash cord)	8.44	
Josephine Eck (rent)	8.00	
Jos. T. Ryerson & Son (wire nails)	7.90	
John F. Klein (teaming)	4.50	
Peth & Goeler (material and labor)	4.00	
Chas. E. Arnold Company (supplies)	3.70	
Nelson Bros. Laundry Company (towel service)	2.00	
Chicago Towel Company (towel service)	1.25	
Public Service Company of Northern Illinois (electrical energy)	.75	
Geo. B. Carpenter & Co. (freight charges)	.56	
Commonwealth Edison Company (electrical energy)	.50	
The Peoples Gas Light & Coke Company (gas service)	.37	
T. J. Forschner Contracting Company (work on Calumet sewage pumping station)	66,130.43	
Nash-Dowdle Company (work on Evanston pumping station)	17,019.23	
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	13,470.66	
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	656.25	
A. Guthrie & Co., Inc. (labor and material on B. & O.-C. T. R. R., Calumet-Sag Channel)	114.95	
The Baltimore & Ohio-Chicago Terminal R. R. Company (B. & O.-C. T. R. R. bridge, Calumet-Sag Channel)	5,581.21	
E. A. Hanrahan (cleaning outfall east of Section 9, south Calumet-Sag Channel and south of Tinley creek)	485.00	
A. Guthrie & Co., Inc. (placing concrete around machinery)	96.66	
		210,143.81
Maintenance and Operation Account.		
L. F. King, Clerk (freight charges on coal, Lawrence Ave. Pumping Station)	$ 1.00	
L. F. King, Clerk (gas service, Lawrence Ave. Pumping Station)	.94	
Geo. E. Corbett Boiler & Tank Company (repairs, Lawrence Ave. Pumping Station)	399.00	
Green Engineering Company (repairs, Lawrence Ave. Pumping Station)	321.66	
Amounts carried forward	$ 722.60	$239,941.55

Amounts brought forward	$ 722.60	$239,941.55
Green Engineering Company (repairs to furnaces, Lawrence Ave. Pumping Station)	176.64	
North Shore Ash Company (removing cinders and refuse, Lawrence Ave. Pumping Station)	86.40	
Green Engineering Company (labor and material, Lawrence Ave. Pumping Station)	15.20	
Sangamon County Mining Company (coal, Lawrence Ave. Pumping Station)	239.44	
Lynch-Clarisey Company (boiler compound, Lawrence Ave. Pumping Station)	164.39	
Geo. B. Carpenter & Co. (Peerless hoist, Lawrence Ave. Pumping Station)	84.00	
Geo. B. Carpenter & Co. (iron blocks, Lawrence Ave. Pumping Station)	57.33	
Geo. B. Carpenter & Co. (steel cable and wire clips, Lawrence Ave. Pumping Station)	16.25	
Geo. B. Carpenter & Co. (sout pump, Lawrence Ave. Pumping Station)	2.05	
Sullivan Oil Company (cylinder oil, Lawrence Ave. Pumping Station)	67.52	
Trumbull Waste Mfg. Company (white cotton waste, Lawrence Ave. Pumping Station)	16.09	
Gregory Electric Company (brushes, Lawrence Ave. Pumping Station)	10.87	
Kirby Motor Trucking Company (trucking services, Lawrence Ave. Pumping Station)	9.62	
Chicago Fire Brick Company (fire clay, Lawrence Ave. Pumping Station)	9.00	
Hinckley & Schmitt, Inc. (drinking water, Lawrence Ave. Pumping Station)	8.50	
Hinckley & Schmitt, Inc. (drinking water, Lawrence Ave. Pumping Station)	8.50	
Motor Mica Products Company (Motor Mica grease, Lawrence Ave. Pumping Station)	7.50	
Monarch Electric Wire Company (attachment plugs, Lawrence Ave. Pumping Station)	7.81	
Fuller-Morrison Company (ammonia, Lawrence Ave. Pumping Station)	5.50	
Stebbins Hardware Company (carborundum wheels, Lawrence Ave. Pumping Station)	5.30	
Stebbins Hardware Company (flashlight, etc., Lawrence Ave. Pumping Station)	2.10	
Stebbins Hardware Company (washers and nuts, Lawrence Ave. Pumping Station)	1.54	
Stebbins Hardware Company (stove bolts, Lawrence Ave. Pumping Station)	1.48	
The Lunkenheimer Company (globe valves, Lawrence Ave. Pumping Station)	3.34	
Jos. T. Ryerson & Son (bars and steel, Lawrence Ave. Pumping Station)	2.47	
Jos. T. Ryerson & Son (steel rings, Lawrence Ave. Pumping Station)	1.60	
Jos. T. Ryerson & Son (steel, Lawrence Ave. Pumping Station)	.43	
Golden-Anderson Valve Specialty Company (valves, 39th St. Pumping Station)	243.00	
Golden-Anderson Valve Specialty Company (valves, 39th St. Pumping Station)	486.00	
The Babcock & Wilcox Company (repairs, 39th St. Pumping Station)	340.23	
Amounts carried forward	$ 2,802.70	$239,941.55

Amounts brought forward	$ 2,802.70	$239,941.55
The Kellogg-Mackay Company (pipe fittings, 39th St. Pumping Station)	224.01	
Kenwood Trucking & Teaming Company (removing cinders, 39th St. Pumping Station)	180.00	
Wilbur J. Connell (tools, 39th St. Pumping Station)	86.48	
The Fair (linoleum, 39th St. Pumping Station)	65.10	
Geo. B. Carpenter & Co. (chain hoist and chain, 39th St. Pumping Station)	59.40	
Geo. B. Carpenter & Co. (snatch blocks and lantern wicks, 39th St. Pumping Station)	12.59	
Stebbins Hardware Company (machine bolts, 39th St. Pumping Station)	58.43	
Stebbins Hardware Company (repairs, 39th St. Pumping Station)	5.67	
Stebbins Hardware Company (keys, 39th St. Pumping Station)	1.75	
H. W. Johns-Manville Company (cement, 39th St. Pumping Station)	54.00	
Crane Company (pipe fittings 39th St. Pumping Station)	50.03	
Crane Company (iron cocks, 39th St. Pumping Station)	29.61	
Holman Soap Company (soap powder, 39th St. Pumping Station)	37.24	
Bentley, Murray & Co. (printing, 39th St. Pumping Station)	34.00	
A. Daigger & Co. (supplies, 39th St. Pumping Station)	29.90	
A. Daigger & Co. (supplies, 39th St. Pumping Station)	21.90	
A. Daigger & Co. (supplies, 39th St. Pumping Station)	11.64	
United Asbestos & Packing Company (rubber sheets, 39th St. Pumping Station)	19.57	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	17.00	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	17.00	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	8.50	
Jas. B. Clow & Sons (pipe fittings, 39th St. Pumping Station)	14.52	
Jos. T. Ryerson & Son (steel, 39th St. Pumping Station)	12.78	
Stewart Ice Company (ice 39th St. Pumping Station)	12.00	
The Lunkenheimer Company (grease cups, 39th St. Pumping Station)	10.34	
Fuller-Morrison Company (ammonia, 39th St. Pumping Station)	8.05	
Consumers Company (smithing coal, 39th St. Pumping Station)	4.25	
Three Products Company (silica, 39th St. Pumping Station)	2.13	
Bissell Laundry (towel service, 39th St. Pumping Station)	1.99	
Bissell Laundry (towel service, 39th St. Pumping Station)	1.76	
Parker's Towel Supply Company (towel service, 39th St. Pumping Station)	1.60	
S. Deschauer Company (Hexagon nuts, 39th St. Pumping Station)	.98	
Koehring Machine Company (cement mixer)	839.05	
Conroy Boiler & Tank Works (labor and material)	333.57	
Consumers Company (gravel, etc.)	278.42	
The Thos. F. Ryan Company (lumber)	140.41	
Wm. O'Connell (supplies)	117.18	
National Lead Company (red lead in oil)	115.10	
National Lead Company (red lead in oil)	63.94	
Amounts carried forward	$ 5,784.59	$239,941.55

Amounts brought forward	$ 5,784.59	$239,941.55
Consumers Company (gravel, etc.)	105.46	
F. J. Koch Company (printing)	100.75	
The Kellogg-Mackay Company (pipe fittings, etc.)	90.54	
David G. Murray (teaming)	87.56	
David G. Murray (teaming)	87.56	
Thornton-Clancy Lumber Company (lumber)	75.99	
Bentley, Murray & Co. (printing)	72.00	
A. Hannibal (repairing chairs)	65.00	
Southwest Printing Company (printing)	64.00	
Gulick, Henderson Company (testing coal)	63.50	
E. Tillman (use of single rig)	60.40	
Mike Riess (storage and watching lumber)	60.00	
Thornton-Clancy Lumber Company (roofing paper)	29.70	
Thornton-Clancy Lumber Company (lumber)	48.29	
Fischer & Hayes Rope & Steel Company (manila rope)	74.88	
Jos. T. Ryerson & Son (twisted bars steel)	54.06	
Mears-Slayton Lumber Company (lumber)	48.40	
Jos. T. Ryerson & Son (bars of steel)	44.18	
The Fred J. Ringley Company (letterheads)	42.00	
The Fred J. Ringley Company (letterheads)	32.50	
Kirby Motor Trucking Company (motor truck service)	32.92	
North Shore Hardware Company (supplies)	27.74	
North Shore Hardware Company (supplies)	20.22	
G. Johnson (teaming)	27.00	
Otley Paint Mfg. Company (Eureka black graphite)	26.14	
Otley Paint Mfg. Company (Eureka black graphite)	21.68	
Consumers Company (gravel)	21.88	
Barrett Hardware Company (bars steel)	20.05	
Barrett Hardware Company (chisels)	3.20	
Geo. B. Carpenter & Co. (rope)	17.83	
Geo. B. Carpenter & Co. (wire nails, etc.)	6.83	
American Supply Company (white waste)	16.20	
Jas. B. Campbell & Co. (supplies)	16.90	
Parker's Towel Supply Company (towel service)	16.20	
Parker's Towel Supply Company (towel service)	1.00	
A. Daigger & Co. (supplies)	16.00	
Mears-Slayton Lumber Company (lumber)	14.31	
Argo Summit Lumber Company (lumber)	13.24	
The Kellogg-Mackay Company (galvanized pipe)	10.52	
Keuffel & Esser Company (gross section paper)	10.50	
Wadsworth-Howland Company (paint)	10.27	
Evanston Battery Station (batteries and bulbs)	9.60	
Stebbins Hardware Company (weed scythes and grass snathes)	9.38	
Stebbins Hardware Company (bolts, screws and washers)	.67	
Miller Hardware Company (supplies)	8.18	
Rand, McNally & Co. (map)	6.50	
American Bosch Magneto Corporation (repairs)	6.30	
Bearings Service Company (Timken cup, etc.)	5.04	
A. C. McClurg & Co. (Engineers' Handbook)	5.00	
Central Electric Company (lamp guard, etc.)	3.90	
Eugene Dietzgen Company (paper)	2.52	
Frank J. Grabashi (labor and material)	2.00	
Wilbur J. Connell (paint pails)	1.89	
Chicago Brass Works (bronze casting)	1.80	
Stafford-Smith Company (port hole gaskets, etc.)	1.40	
C. Hacker Company (sash)	1.25	
Burr-Vack Company (stamps)	.80	
Produce Terminal Corporation (power)	33.20	
Abe Burell & Co. (labor and material repairing scows)	392.79	
Amounts carried forward	$ 7,917.31	$239,941.55

Amounts brought forward	$ 7,917.31	$239,941.55
L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	157.00	
L. F. King, Clerk (freight charges paid I. C. for fuel to 39th St. Pumping Station)	257.94	
L. F. King, Clerk (freight charges paid I. C. for fuel to 39th St. Pumping Station)	107.07	
The Wm. H. Reid Company (engine and cylinder oil)	412.21	
Geo. B. Carpenter & Co. (chain hoist)	348.10	
Theo. B. Robertson Products Company (soap powder)	14.99	
L. F. King, Clerk (special roll, 39th St. Pumping Station)	269.60	
		9,501.12

Illinois and Michigan Canal and Illinois River Conditions Department.

C. J. Van Houten & Zoon (cord tube, etc.)	$ 64.00	
American Blue Print Paper Company (blue prints)	46.76	
American Blue Print Paper Company (blue prints)	2.50	
Willard Storage Battery Company (batteries recharged)	41.78	
Riddle & Wunderle Company (pencils, etc.)	38.68	
A. Leschen & Sons Rope Company (rope)	27.70	
Keuffel & Esser Company (profile cloth, etc.)	25.73	
Stebbins Hardware Company (wire cloth)	20.73	
Crown Garage (repairs and taxi service)	20.35	
Stebbins Hardware Company (wire cloth)	17.50	
John Naghten & Co. (insurance)	13.20	
Graham Seltzer Company (Pyrene fire extinguisher)	10.42	
Graham Seltzer Company (bulbs, etc.)	4.86	
The Fred J. Ringley Company (printing)	8.50	
Sweet, Wallach & Co. (films)	8.16	
Peoples Telephone Company (telephone service)	7.20	
Standard Oil Company (oil)	3.96	
Fuller-Morrison Company (sponges)	1.78	
The Berkshire Company (wrapping paper)	.67	
		362.48

Law Department.

L. F. King, Clerk (revenue stamps)	$ 74.00	
The Fred J. Ringley Company (printing)	39.50	
New Southern Garage (washing car, storage and gasoline)	28.05	
H. C. Immenhausen (maintenance of auto for Claim Department)	27.00	
Callaghan & Co. (Federal Statutes)	15.00	
Albert Hancock & Co. (books, etc.)	14.30	
Emery Motor Livery Company (taxi service)	10.50	
Chas. W. Vail (copy of opinion)	10.00	
A. Hannibal (repairing chairs)	7.75	
Chicago Law Directory (law directories)	6.00	
Riddle & Wunderle Company (Hotchkiss machines)	4.70	
Mead & Wheeler Company (3 locks for bookcases)	4.50	
A. Hannibal (repairing chair)	2.69	
Monarch Electric & Wire Company (dry battery)	.45	
L. F. King, Clerk (expenses of employe)	5.40	
F. H. Stephens (stenographic services rendered)	38.50	
A. A. Bach (expenses incurred investigating)	12.62	
Martin Delaney (services rendered and expenses incurred)	185.66	
		486.62

Clerical Department.

L. F. King, Clerk (expenses of employe)	$ 4.20	
O. W. Huncke & Co. (bond of Lawrence F. King, Clerk)	250.00	
Jas. D. Ahern Company (lettering doors)	16.70	
American Metal Market Company (subscription)	10.00	
Amounts carried forward	$ 280.90	$250,291.77

Amounts brought forward	$ 280.90	$250,291.77
The Fred J. Ringley Company (printing)	5.00	
Riddle & Wunderle Company (repairing and cleaning machines)	3.60	
		289.50

General Account.

L. F. King, Clerk (trip of officials to Illinois Valley, etc.)	$ 59.00	
L. F. King, Clerk (supplies for Robert "R" incurred on various trips of Trustees re water power development)	33.26	
L. F. King, Clerk (expenses of chauffeur on inspection trip through Illinois Valley)	112.28	
L. F. King, Clerk (railroad tickets for officials from Chicago to Peoria)	20.68	
Fred Klein Company (printing Proceedings)	494.25	
The Fred J. Ringley Company (printing)	36.50	
A. B. Dick Company (Imp paper)	17.50	
Sweet-Wallach & Co. (prints, etc.)	23.32	
A. Hannibal (repairing chair)	12.00	
Standard Oil Company (labor and material)	3.30	
Sweet-Wallach & Co. (prints)	.90	
J. L. Jacobs & Co. (services in connection with investigation)	1,986.67	
		2,799.76

Electrical Department.

L. F. King, Clerk (water taxes)	$ 15.00	
L. F. King, Clerk (water taxes)	4.23	
L. F. King, Clerk (water taxes)	3.75	
General Electric Company (lead covered cable)	7,793.15	
Conroy Boiler & Tank Works (repairing oil tanks)	484.00	
Western Electric Company (wire)	395.94	
Jeffery-Lewitt Insulator Company (units)	384.94	
Standard Underground Cable Company (cable)	373.00	
Commonwealth Edison Company (globes, etc.)	368.70	
Chicago Telephone Company (telephone service)	339.11	
The National Atomizer Company (atomizers)	300.00	
The Ohio Brass Company (insulators)	280.76	
General Electric Company (current transformers)	270.00	
The Texas Company (oil)	242.90	
L. F. King, Clerk (postage stamps)	70.18	
L. F. King, Clerk (semi-monthly payroll)	19,426.13	
L. L. Fleig & Co. (paper)	47.04	
Wilbur J. Connell (mill files, etc.)	29.19	
Garret J. Cushing (personal injuries)	26.00	
Sidney Smith (polish)	15.84	
Wilbur J. Connell (Trimo wrench)	11.07	
Chicago Chemical & Polish Company (metal polish)	10.45	
General Electric Company (demand meters)	238.50	
Union Petroleum Company (gasoline)	222.43	
Commercial Tire & Auto Company (vacuum cup tires)	194.00	
Commonwealth Edison Company (repairing transformers)	185.16	
Werden Buck (sand, etc.)	181.62	
Bentley, Murray & Co. (printing)	166.00	
Conroy Boiler & Tank Works (arm braces)	154.22	
Western Electric Company (binding posts)	128.80	
Geo. B. Carpenter & Co. (jute rope, etc.)	116.12	
National Lead Company (lead in oil)	114.66	
Mikisell Bros. Company (rubber splicing taps)	70.00	
Central Scientific Company (flash point tester, etc.)	64.10	
Monarch Electric & Wire Company (carbon lamps)	52.50	
Amounts carried forward	$ 32,779.49	$253,381.03

Amounts brought forward	$ 32,779.49	$253,381.03
The White Company (chains)	52.21	
Naugle Pole & Tie Company (cedar poles)	51.40	
A. C. Miller (gasoline)	50.60	
Lord & Bushnell Company (lumber)	48.82	
Albert Hancock & Co. (oak cabinets)	45.00	
The Wilson Rubber Company (rubber gloves)	44.37	
Anderson Oil Company (oil)	41.00	
Consumers Company (ice)	39.50	
Garret J. Cushing (personal injuries)	39.00	
American Supply Company (shade cloth)	38.81	
Barrett Hardware Company (cap screws, etc.)	37.65	
Wm. Smith (personal injuries)	37.00	
United Asbestos Packing Company (grey felt)	32.17	
Hydrox Company (drinking water)	32.00	
Hydrox Company (drinking water)	32.00	
The C. H. Hanson Company (plates)	28.70	
Auto Radiator Company (2 fenders)	25.00	
Wilbur J. Connell (eaves trough, etc.)	24.65	
David G. Murray (teaming)	23.88	
Jas. B. Clow & Sons (globe valves)	23.18	
American Telephone & Telegraph Company (rental of poles)	22.71	
American Blue Print Paper Company (blue prints)	22.04	
Standard Oil Company (gasoline and oil)	20.42	
The Berkshire Company (paper)	20.01	
Stebbins Hardware Company (machine screws, etc.)	17.52	
Weil Bros. (C. I. tee scrd., etc.)	15.91	
Monarch Electric & Wire Company (standard wire, etc.)	14.58	
New York Belting & Packing Company (leather belt)	14.34	
Windle Garage (storage charges)	13.50	
Parker's Towel Supply Company (towel supply)	13.50	
Wilbur J. Connell (pipe dies, etc.)	13.02	
Geo. A. Ducker Company (cable)	13.00	
The Esterline Company (record charts)	11.48	
L. L. Fleig & Co. Inc. (friction tape)	10.96	
Zenks Hotel (expenses of linemen)	9.60	
Garden City Spring Works (plates, etc.)	9.50	
Farrell, Kemp & Gushe Company (pipe)	9.00	
Auto Radiator Mfg. Company (repairing radiator)	7.50	
Standard Oil Company (gasoline)	5.75	
Central Electric Company (lamps, etc.)	5.43	
The Electric Auto Lite Service Station (circuit breaker, etc.)	4.06	
The Western Union Telegraph Company (rental of clock)	3.75	
American Blue Print Paper Company (blue prints)	3.56	
S. & L. Motor Company (springs)	3.12	
Western Union Telegraph Company (clock service)	3.00	
United Asbestos & Packing Company (gum rubber)	2.80	
Interstate Brass Company (strip brass)	2.60	
Essenkay Products Company (changing tire)	2.50	
Theo. B. Robertson Products Company (soap powder)	2.50	
A. Kich (overpayment on electric light account)	1.00	
Pellet Magneto Company (wrench kit)	1.00	
L. F. King, Clerk (expenses of employe)	4.66	
L. F. King, Clerk (25 ride ticket to Blue Island)	4.35	
L. F. King, Clerk (expenses of employe)	2.00	
Conroy Boiler & Tank Works (arm braces)	477.60	
Conroy Boiler & Tank Works (ground rods)	228.85	
Rhodes Metallic Pkg. Company (sets of packing)	342.61	
Gregory Electric Company (cycle compensator)	294.00	
The Texas Company (oil)	127.01	
Western Electric Company (wire)	93.10	
Amounts carried forward	$ 35,400.27	$253,381.03

Amounts brought forward		$ 35,400.27	$253,381.03
United Asbestos & Packing Company (emery cloth, etc.)		69.57	
Wilbur J. Connell (taps, etc.)		52.38	
Aurilla Scully, Admx. (compensation for death of husband)		50.00	
Commonwealth Edison Company (Mazda lamps)		40.88	
Commonwealth Edison Company (desk fan)		29.89	
Tungsten Mfg. Company (Tungsten lamps)		15.29	
The Texas Company (grease)		6.12	
Chicago Wheel & Rim Company (small wedges)		5.47	
			35,669.87
Miscellaneous Accounts.			
L. F. King, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 5.23		
Clerical Department	15.80		
General Account	1.64		
Electrical Department	2.50		
		$ 25.17	
L. F. King, Clerk (expenses of employe)—			
Construction Account	$ .75		
Maintenance and Operation Account	.39		
		1.14	
Chicago Telephone Company (telephone service)—			
Maintenance and Operation Account	$ 11.50		
Law Department	8.50		
Clerical Department	1.80		
Police Department	.65		
General Account	205.72		
Sundry Accounts Receivable	99.90		
Electrical Department	4.25		
		332.32	
F. Dyckman (auto hire for Paymaster)—			
Maintenance and Operation Account	$ 5.60		
Electrical Department	22.40		
		28.00	
L. F. King, Clerk (roll for repairs to walls, Main Channel bridges and North Shore Channel Bridges)—			
Construction Account	$ 730.52		
Maintenance and Operation Account	4,230.76		
Real Estate Department	207.81		
		5,169.09	
L. F. King, Clerk (special roll, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 144.00		
Electrical Department	96.00		
		240.00	
L. F. King, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 11.85		
Clerical Department	18.33		
Electrical Department	7.00		
		37.18	
L. F. King, Clerk (expenses of employe)—			
Construction Account	$ .20		
Maintenance and Operation Account	5.35		
		5.55	
C. Arch Williams, Attorney (cash box account of Law Department)—			
Construction Account	$ 3.00		
Law Department	75.72		
General Account	3.97		
		82.69	
Amounts carried forward		$ 5,921.14	$289,050.90

Amounts brought forward		$ 5,921.14	$289,050.90
Chicago Telephone Company (telephone service)—			
Construction Account	$ 68.37		
Maintenance and Operation Account	13.83		
		82.20	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 23.50		
Maintenance and Operation Account	38.34		
Police Department	.10		
		61.94	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 192.03		
Maintenance and Operation Account	4.27		
Law Department	17.77		
Real Estate Department	1.65		
General Account	1.80		
		217.52	
L. F. King, Clerk (repairs to Main Channel bridges and North Shore Channel bridges; also walls of Main Channel)—			
Construction Account	$ 826.95		
Maintenance and Operation Account	5,675.74		
		6,502.69	
			12,785.49
Grand Total			$301,836.39

Yours respectfully,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller and Paullin—Six.

Nays—None.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has had under consideration the adoption by the Sanitary District of a program for the construction and operation of works for the purification of human sewage, trade wastes and other similar matter passing through the Main Channel of the Sanitary District to the Desplaines river to supplement and aid the diversion works constructed or in process of construction to divert sewage and drainage to said Desplaines river.

Your Committee believes that an ordinance should be adopted, laying out such program and, therefore, presents to the Board such an ordinance and recommends the passage of same, including the preambles thereof.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

AN ORDINANCE

Of the Board of Trustees of The Sanitary District of Chicago Laying Out and Adopting a Program for the Construction and Operation of Works for the Purification of or the Removal of Solids and Organic and Inorganic Matter from Sewage, Trade Waste, Offall and Other Organic and Inorganic Matter so That Within the Period of the Next Twenty-five Years Not More Than Fifty Per Cent of the Amount of Said Sewage and Waste That Is Now Passing into the Desplaines River from the Main Channel of the Sanitary District will at the End of Such Period Find Its Way Into said River. Such Works are to Supplement Those Constructed or in Process of Construction for the Diversion of Sewage and Drainage Arising Within the Limits of The Sanitary District of Chicago.

WHEREAS, The Sanitary District of Chicago was organized and now exists under an Act of the General Assembly passed on May 29, 1889, in force July 1, 1889, entitled, "An Act to Create Sanitary Districts and to Remove Obstructions in the Illinois and Desplaines Rivers," and Acts amendatory thereof or supplementary thereto; and,

WHEREAS, The said Act of the General Assembly provided for the construction and operation of the Main Channel of the Sanitary District, including adjuncts and additions thereto whereby the sewage and drainage of the City of Chicago and its environs should be diverted from Lake Michigan to the Desplaines river, together with a certain amount of water from Lake Michigan fixed according to the population of the District as it might exist when such Main Channel should be constructed and as the population might thereafter increase, to-wit: Twenty thousand cubic feet of water per minute for each one hundred thousand of the population; and the Board of Trustees of The Sanitary District of Chicago is directed by said Act of the General Assembly to operate said works specified with such diversion of water; and,

WHEREAS, Said Act of the General Assembly was passed and the works provided therein to be constructed were built in order to relieve the people of Chicago and environs of a serious menace to their health and lives arising by virtue of the pollution of Lake Michigan, the only water supply of Chicago by sewage passing into same by way of the Chicago and Calumet rivers and by way of sewers debauching directly into the lake at various points along Chicago's water front; and the said works were intended also to relieve the Desplaines and Illinois rivers of a serious condition of pollution due to a certain amount of sewage and wastes of Chicago and environs passing into said river through the Illinois and Michigan Canal; and,

WHEREAS, The death rate per year from typhoid fever prior to the operation of the Main Channel of the Sanitary District at times equalled one hundred ninety per one hundred thousand of the population of Chicago, and its environs, which required the immediate construction and operation of works to relieve such condition; and,

WHEREAS, Immediately after the passage of said Act of the General Assembly of May 29, 1889, the Sanitary District was organized and thereafter commenced the construction of the Main Channel of the Sanitary District, extending from Robey street and the West Fork of the South Branch of the Chicago river to the Desplaines river near Lockport, Illinois, a distance of thirty-two miles; and the work of constructing said Main Channel was carried forward with due speed until January 17, 1900, when the said Main Channel was placed in operation pursuant to the permit of the Governor of Illinois, in accordance with said Act, and the permit

and consent of the Secretary of War of the United States; and the said Main Channel of the Sanitary District cost the people of Chicago and its environs many million dollars; and there was required for such construction the use of all the money that could be raised by the Sanitary District from taxation and by the issuance of bonds; and,

WHEREAS, The Sanitary District was compelled to construct and place in operation many adjuncts and additions to the Main Channel of the Sanitary District in order that the said Main Channel might accomplish the purpose for which it was constructed and there would thereby be constructed and placed in operation a complete and comprehensive system for the diversion of the sewage and drainage arising within the limits of the Sanitary District from Lake Michigan to the Desplaines river; and such works included the intercepting sewers and pumping stations on the North Shore and South Shore of Chicago, the Calumet-Sag Channel, with its intercepting sewers, the enlargement of the flowage channel of the South Branch of the Chicago river and the West Fork of said South Branch, the replacing of many old center-pier bridges with bascule bridges of modern type, and they included also many other works of similar character; and the construction of such works has largely engaged the resources of the Sanitary District; and,

WHEREAS, The works so constructed and placed in operation have caused a decrease in the death rate from typhoid fever per year in the City of Chicago and environs from an average rate of over seventy-five per one hundred thousand of the population for the ten years immediately preceding the opening of the drainage channel, so that now the death rate from typhoid fever is less than one-half of one per one hundred thousand of population; and,

WHEREAS, The Board of Trustees of the Sanitary District has recognized that by reason of various conditions existing, such as trade wastes and other materials passing into its channels and the inability to obtain at all points the necessary amount of water to dilute the sewage, thus causing local nuisances, that works should be constructed and operated to remove a material portion of organic and inorganic matter from human sewage, and also to remove and eliminate a material portion of trade wastes and other materials so that the amount of organic and inorganic matter in sewage and the amount of trade wastes and other materials passing through the Main Channel of the Sanitary District into the Desplaines river would be materially diminished; and The Sanitary District of Chicago has for such purposes carried on experiments and investigations to ascertain the best method to accomplish such results; and it has constructed at Morton Grove, Illinois, an Imhoff tank for the removal of a certain portion of the solids from the sewage of the Town of Morton Grove, and is constructing in connection with such Imhoff tank a sprinkling filter to further purify the sewage of said town; and the Sanitary District is constructing an activated sludge plant with necessary intercepting sewers for the collection and purification of the sewage of the Towns of Riverside, Maywood, River Forest and others, the sewage of which towns is now passing into the Desplaines river; and the Sanitary District has authorized the condemnation of one hundred acres of land near the Calumet sewage pumping station at 125th street and Michigan avenue, Chicago, upon which site there is to be constructed an artificial sewage disposal plant for the removal of organic and inorganic matter from human sewage and wastes that may pass into the Calumet intercepting sewer; and the Sanitary District of Chicago has, in the Stock Yards District, to take care of the trade wastes of Packingtown, acquired a site for purification works to be constructed thereon to remove trade

wastes and organic and inorganic matters from human sewage now finding their way from that locality to the Main Channel of the Sanitary District; and the South Park Improvement Project provides for the setting aside of sufficient land for the construction of purification works for the sewage and wastes collected at 39th street and Lake Michigan by the intercepting sewers converging at that point, which intercepting sewers serve a population of approximately five hundred thousand people; and,

WHEREAS, The Chief Engineer of The Sanitary District of Chicago has made investigation of the amount of trade wastes and other wastes requiring pure water to oxidize same, now being discharged through the Main Channel of the Sanitary District into the Desplaines river, and the Chief Engineer has found and the Board of Trustees of the Sanitary District believes that the amount of such wastes is approximately equal, if it does not exceed, the amount of human sewage now passing into said Main Channel and through same to the Desplaines river; and that there is required to oxidize said wastes and render same innocuous and non-putrescible, as much or more water from Lake Michigan than is required to oxidize and render innocuous and non-putrescible the human sewage of the present population within the territorial limits of The Sanitary District of Chicago; and by reason of such wastes passing into said channel and thereby into the Desplaines river, the works of the Sanitary District do not fully accomplish the purpose designed and nuisances are created at various places, which nuisances should be abated; and,

WHEREAS, It is the recommendation of the Chief Engineer of the Sanitary District that works should be constructed and operated to supplement the diversion works of the Sanitary District constructed or in process of construction whereby the amount of human sewage and the amount of trade wastes and other material should be continuously diminished from year to year so that at the end of a period of twenty-five years at least only one-half the amount of sewage, including all wastes that is now passing into the Desplaines river from the Main Channel of the Sanitary District shall enter same by way of said Main Channel; and the Board of Trustees of the Sanitary District believes that within the period of four years works of such character can be constructed and placed in operation to materially diminish the amount of such sewage and wastes passing into the said Desplaines river, as aforesaid; now, therefore,

Be It Ordained by the Board of Trustees of The Sanitary District of Chicago:

SECTION 1. To supplement the works of The Sanitary District of Chicago now constructed or in the process of construction for the diversion of sewage or drainage, and to aid said works in better accomplishing the purpose for which they were constructed, the Sanitary District does hereby lay out and adopt a program for the construction and operation of works for the purification of sewage or the removal of organic or inorganic matter from human sewage and the removal of trade wastes and other wastes and for the carrying on of such work at such a rate as continuously after the lapse of four years to diminish the amount of sewage including all wastes passing into the Desplaines river by way of the Main Channel of The Sanitary District of Chicago, so that within the period of twenty-five years such purification works shall be constructed and in operation, that the amount of such raw sewage and wastes so passing into said Desplaines river shall be at least fifty per cent less than that passing now.

SEC. 2. The Chief Engineer and the Attorney of the Sanitary District are

hereby directed to take such steps as may be necessary to carry forward the foregoing program, and the Chief Engineer is directed to report to such officers of the United States and the State of Illinois as may be interested, the progress made from time to time in carrying out said program.

SEC. 3. The foregoing preamble to this ordinance is hereby adopted and made a part of same.

SEC. 4. This ordinance shall be in full force and effect from and after its passage and adoption.

Mr. Clark moved that the report be adopted and that the ordinance and order, including the preambles, be passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on April 10, 1919 (page 326 of the Proceedings), Abraham Burrell entered into a contract with the Sanitary District for the repair of two scows, said work to be performed on the basis of eighty cents per hour for wages of mechanics and carpenters and eight dollars per day wages of foremen, and the actual cost of material.

Your Commitaee further reports that it has received a communication from the Chief Engineer in which he states that the work on the first scow was completed, and that shortly after starting work on the second scow it was found to be in such bad condition it could not be repaired for the amount of money remaining in the Budget for repairs to floating equipment; that thereupon he stopped said work pending the transfer of funds to the proper Budget account to provide for said repairs; that then came a general strike of carpenters for higher wages, and when he ordered said contractor to resume work said contraector informed him that the cost of labor had been increased to $1.15 per hour and said contractor claimed that the contract had been terminated.

Your Committee further reports it is advised by the Attorney that said contractor cannot be compelled to make said repairs at the price specified in said contract.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to employ Abraham Burrell to complete the work of repairing said second scow on the basis of paying said Abraham Burrell the standard wage scale for mechanics and workmen employed on said work, and the actual cost of all material entering into the same; provided that said Chief Engineer reserves unto himself the right to order said work stopped at the end of any day and provided further that the total cost of said work shall not exceed the sum of $5,000.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on August 1, 1918, Patrick A. Nash and Richard J. Nash, co-partners doing business under the name and style of Nash Bros., entered into a contract with the Sanitary District for the construction of the Des Plaines River Intercepting Sewer, Contract No. 1.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that it is desirable to extend the Lake Street Branch of said sewer eastward for a distance of about 100 feet so that the special manhole giving access to said sewer can be located in Lake street instead of on private property as indicated on the plans of said work. As the manhole is located on said plans, it has been ascertained that it will be difficult of access in times of high water in the Des Plaines River and will also involve considerable expense in flushing said branch of said sewer. Furthermore, that the owners of the property crossed by said branch of said sewer are willing to grant an easement for the construction of the same through their property free of charge, provided said manhole is located in Lake street. He further says that the cost of said branch of said sewer as now shown on said plans is the lump sum price of $15,000.00, and the contractors for said work have agreed to extend said sewer as above stated for the sum of $40.00 per foot, or a total of $4,000.00, and he recommends that he be authorized to order said contractors to perform said work as an extra under the "extra work" clause of said contract.

The Chief Engineer further states that when the contract for said sewer was let, the plans for the Treatment Works had not been fully developed and the plans for said sewer entering the site of said Treatment Works show that the said sewer terminates some distance from tne site of said Works and that it is necessary to extend said sewer on a curve on the point of termination into said Treatment Works, which work is not specified in said contract; that he has negotiated with said contractors for doing said work and has agreed to pay them the sum of $10.00 per lineal foot for doing said work in addition to the amount specified in said contract for the construction of said sewer at said point, the total cost of which will amount to the sum of $800.00, and he likewise requests that he may be authorized to order said contractors to perform said addtional work as an extra under the "extra work" clause of said contract.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to order Patrick A. Nash and Richard J. Nash, co-partners doing business under the name and style of Nash Bros., to perform the two items of work above specified, provided the cost thereof shall not exceed the respective sums of $4,000.00 and $800.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy,

Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting held July 17, 1919 (page 878B of the Proceedings), bids for changing of present City of Chicago 5,000-volt aerial construction under subways to steel pipe construction, armored cable construction or standard underground construction, and for painting metal poles and equipment of the City of Chicago under Divisions "A" and "B" of the specifications and drawings for said work, having considered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the Freeman-Sweet Company of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and, having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for the work above specified be, and the same is hereby awarded to the Freeman-Sweet Company for the unit prices named in its bid under said Division "A," aggregating the sum of $35,907.69, and for the unit prices named in its bid under said Division "B," aggregating the sum of $60,500.00; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate said contract in accordance with the specifications and drawings on which proposals were submitted when the same shall have been executed by the said Freeman-Sweet Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance; and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Lawley, Mueller, Nance and Paullin—Six.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in order to relieve back water pressure under emergency conditions, upon the sluice gates in the dry and storm weather discharge chambers of the Calumet Sewage Pumping Station, it is advisable to construct a by-pass around said sluice gates and install on said by-pass two additional sluice gates of heavy construction, and he requests that he may be authorized to direct the T. J. Forschner Contracting Co., which company is now constructing the said Pumping Station,

to furnish and install said sluice gates under the extra work clause of its contract with the Sanitary District, dated June 20, 1918 (page 893 of the Proceedings), at a cost of not to exceed $1,100.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized to direct the T. J. Forschner Contracting Co., to furnish and install said sluice gates under the extra work clause of its said contract provided the cost of the same shall not exceed the sum of $1,100.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that all the runners on turbine units Nos. 5 and 6 with the exception of one runner on each unit at the Power House near Lockport, Illinois, are badly cracked owing to erosion and should be immediately replaced; that said runners were originally installed by the S. Morgan Smith Company of York, Pennsylvania and are of a patented design. He further states that said Company has offered to furnish ten runners for said units for the sum of $10,250.00 f. o. b. cars York, Pennsylvania, that said price is considerably lower than the Sanitary District paid for the last runners purchased, and he recommends that said offer be accepted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby, authorized and directed to accept the offer of the S. Morgan Smith Company to furnish the runners above specified for the sum of $10,250.00 f. o. b. cars York, Pennsylvania.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the Board on August 31, 1916 (page 1096 of the Proceedings), authorized the execution of an agreement between the Sanitary Dis-

trict and Mary Jane Hess, wherein she granted an easement to the Sanitary District to construct the Calumet intercepting sewer in the Blue Island and Riverdale Road between Halsted street and Wentworth avenue; that one of the terms of said agreement was that when said sewer was constructed that the Sanitary District would pave said road between the streets mentioned with a macadam pavement. He further states that said road is now sufficiently settled to allow said pavement to be constructed thereon, and he requests that he be permitted to prepare plans and specifications therefor.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to prepare plans and specifications for the work above specified and when the same are prepared to present the same to your Committee for its approval.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the wooden bridge across the north drainage ditch on Contract Section 9 of the Calumet-Sag Channel across Henry Road is in immediate need of repairs, and in order to avoid constant maintenance of said bridge, it is advisable to remove the same and in place of a bridge fill in said ditch at said point after installing therein a 30-inch pipe culvert at an estimated cost of $500.00.

Your Committee having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to perform the work above specified, provided the cost of the same shall not exceed the sum of $500.00.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that at the last session of the General Assembly of the State of Illinois the Sanitary District was authorized to construct roadways on the right of way of its various channels.

Your Committee further reports that the Chief Engineer has made a study of the location of a proposed driveway along the right of way of the North Shore Channel, and has reported to your Committee that the most feasible plan is to construct said driveway along the east side of the North Shore Channel from Lawrence avenue north to Lincoln avenue, then across the Lincoln avenue bridge to the west side of said North Shore Channel continuing said driveway to some street within the corporate limits of the City of Evanston, and then again across said North Shore Channel to the east side thereof and along said east side connecting finally with Sheridan Road.

Your Committee further reports that it has examined said route for said proposed driveway and has approved the same, and your Committee is of the opinion that the Chief Engineer should be authorized and directed to prepare plans and specifications for said proposed driveway, and therefore recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to prepare plans asd specifications for the construction of said proposed driveway, and that the Clerk advertise for bids for doing said work in accordance with said plans and specifications so to be prepared by the Chief Engineer; provided, however, that no contract shall be entered into for doing said work until said plans and specifications have been approved by the Board.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on July 21, 1919, the City Council of the City of Chicago passed an ordinance granting to the Sanitary District a perpetual easement, right and authority to construct, reconstruct, repair, maintain and operate intercepting sewers, drains and outlets, together with all necessary appurtenances thereto, the same to be adjuncts of the Calumet-Sag Channel upon, under and through all streets, public alleys and highways of the City of Chicago within its territorial limits traversed by the right-of-way of said intercepting sewers on the terms and conditions stated in said ordinance. The legal description of the rights-of-way of said intercepting sewers, which are three in number, are set forth in said ordinance under headings "A," "B" and "C," and said sewers are otherwise briefly described as follows:

(A) An intercepting sewer to be built for the purpose of taking care of the domestic sewage arising in the territory lying between 95th street and 114th street on the east side of the Calumet river.

(B) An intercepting sewer to be built for the purpose of taking care of the domestic sewage arising in certain territory lying northeasterly of Harbor avenue and extending from the east line of the Strand to the north line of East 95th street, and an overflow sewer extending from the east line of 95th street to the Calumet river.

(C) An intercepting sewer to be built on Edbrooke avenue and Edbrooke avenue produced from the Calumet sewage pumping station to the center thread of the Calumet river, which is designed as an outlet for the excess water coming into said pumping station in times of flood.

Your Committee further reports that Section 4 of said ordinance provides that said ordinance shall be in force and effect from and after passage and approval, and the acceptance of The Sanitary District of Chicago on or before 60 days thereafter.

Your Committee having examined said ordinance, which is herewith transmitted to the Board, is of the opinion that it is for the best interests of the Sanitary District to accept the same and, therefore, recommends the passage of the following order:

Ordered, That the ordinance above specified, which is hereto attached, passed by the City Council of the City of Chicago on July 21, 1919, be, and the same is hereby accepted, and The Sanitary District of Chicago hereby agrees to fully comply with all the terms and conditions thereof; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to file with the City Clerk of the City of Chicago in the name and on behalf of The Sanitary District of Chicago a written acceptance of said ordinance and to agree to fully comply with all the terms and conditions thereof, and it is further

Ordered, That the form of said ordinance be printed in the Proceedings of the Board.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Be It Ordained by the City Council of the City of Chicago:

SECTION 1. That subject always to the conditions hereinafter stated, a perpetual easement, right and authority be and the same are hereby granted and given to The Sanitary District of Chicago to construct, reconstruct, repair, maintain and operate intercepting sewers, drains and outlets, together with all necessary appurtenances thereto, hereinafter designated as "Intercepting Sewers," the same to be adjuncts of the Calumet-Sag Channel of The Sanitary District of Chicago upon, under and through all the streets, public alleys and highways of the City of Chicago within the territorial limits of said City of Chicago traversed by the rights of way of said intercepting sewers, which rights of way are described as follows, to-wit:

(A) That part of East Ninety-seventh street lying west of the west line of Avenue N and east of the Calumet River; also a strip of land sixty (60) feet in width extending from a line one hundred twenty-four (124) feet west of the west line of said Avenue N to the south line of East Ninety-sixth street, the center line of said strip being described as follows:

Beginning at a point in the center line of East Ninety-seventh street one hundred twenty-four (124) feet west of the west line of Avenue N, thence westerly to a point twenty-five (25) feet southwesterly measured at right angles from the southwesterly boundary of the right of way of the Pittsburg, Fort Wayne & Chicago Railroad Co. and forty (40) feet easterly measured at right angles from the easterly channel line of the Calumet River, as established by the United States Government; thence westerly approximately three hundred twenty (320) feet along a line at right angles to said easterly channel line to a point in a line thirty (30) feet northeasterly of and parallel to the southwesterly line

of Block 113, in South Chicago Subdivision; thence northwesterly along a line thirty (30) feet northeasterly of and parallel to the southwesterly line of said Block 113 to an intersection with a line four hunded twenty-five (425) feet east of and parallel to the east line of Baltimore avenue; thence north along a line four hundred twenty-five (425) feet east of and parallel to the east line of Baltimore avenue to the south line of East Ninety-sixth street; also that part of East Ninety-sixth street lying between the east line of Baltimore avenue and a line four hundred fifty-five (455) feet east of and parallel to said east line of Baltimore avenue; also that part of Baltimore avenue lying between the south line of East Ninety-sixth street and the north line of East Ninety-fifth street, all of said right of way being situated in Sections five (5) and six (6), Township thirty-seven (37) north, range fifteen (15) East of the third principal meridian in the City of Chicago, County of Cook and State of Illinois.

(B) That part of East Ninety-fifth street lying between the west line of Baltimore avenue produced and the Calumet River, also a strip of land sixty (60) feet in width lying northwesterly of and adjacent to the Indian Boundary line and extending from the north line of East Ninety-fifth street to the southwesterly line of South Chicago avenue; also that part of Harbor avenue extending from the southwesterly line of South Chicago avenue to the east line of The Strand, including all street and alley intersections between said limits, and

(C) A strip of land sixty-six (66) feet in width across Block three (3) in Warren's Addition to Wildwood, the center line of said strip of land being the center line of Edbrooke avenue produced northward; also Edbrooke avenue from the south line of said block three (3) to the south line of East 127th street, including all street and alley intersections; also a strip of land sixty-six (66) feet in width extending from said south line of East 127th street to the center line of the Little Calumet River, the center line of said strip of land being a line extending from the intersection of the center line of Edbrooke avenue with the south line of East 127th street southwesterly parallel with the westerly line of Indiana avenue; all of said land being located in Section twenty-eight (28), township thirty-seven (37) north, range fourteen (14) east of the third principal meridian south of the Indian boundary line, in the City of Chicago, County of Cook and State of Illinois,

said respective rights of way being colored in red on the plats hereto attached, marked Exhibits A, B and C.

SEC. 2. That the City of Chicago shall have the right to connect in a manner to be approved by the Chief Engineer of The Sanitary District of Chicago any new sewer (not including, however, house drains) or system of sewers hereinafter installed by the City of Chicago with the intercepting sewers to be constructed hereunder by The Sanitary District of Chicago.

SEC. 3. That the rights hereby granted to the said The Sanitary District of Chicago are so granted upon the conditions:

(a) That the said The Sanitary District of Chicago shall, at its sole cost and expense, construct in the streets and highways of the City of Chicago, suitable sewer connections for the City of Chicago in said intercepting sewers at such points in said sewers as may be agreed upon by the Chief Engineer of The Sanitary District of Chicago and the Commissioner of Public Works of the City of Chicago.

(b) Whenever or wherever said The Sanitary District of Chicago shall, in the construction of said intercepting sewers, intercept or cut or cause to be inter-

cepted or cut any sewerage pipes or other pipes or conduits through which sewage or drainage may flow, said The Sanitary District of Chicago shall, at its sole cost and expense, restore said pipes and conduits to their former condition of usefulness or connect the same directly with the said intercepting sewers in a manner to be approved by the Commissioner of Public Works of the City of Chicago.

(c) That The Sanitary District of Chicago shall, at its own expense, make such changes in the location of the police and fire alarm electrical wires of the City of Chicago as may be rendered necessary by the construction of the said intercepting sewer, such changes shall be made at the places and in the manner designated by the Commissioner of Public Works of the City of Chicago, and subject to the approval of the Commissioner of Gas and Electricity.

(d) That said intercepting sewers of The Sanitary District of Chicago shall be constructed, reconstructed, repaired and efficiently maintained and operated solely by The Sanitary District of Chicago at its sole cost and expense; and the said City of Chicago shall not be held responsible in any manner for the location or manner of construction, reconstruction, maintenance, repair or operation of the same.

(e) That The Sanitary District of Chicago shall indemnify and hold harmless the City of Chicago from any and all claims for damages to real and personal property and injuries or death suffered by persons by reason of the construction, reconstruction, repair, maintenance or operation of said intercepting sewers within the corporate limits of the said City of Chicago.

(f) That said The Sanitary District of Chicago shall at its sole cost and expense restore, to their former condition of usefulness, pavements of all streets, public alleys and highways disturbed or interfered with by the construction, reconstruction, maintenance, repair or operation of said intercepting sewers, as well as all walks, cross-walks, curbs, gutters, catch basins and other public property of the City of Chicago, as soon as is practicable. All surplus excavation and other spoil shall be removed from the paved streets, public alleys and highways by said The Sanitary District of Chicago within a reasonable time, provided, however, The Sanitary District of Chicago is hereby given the right subject to the approval of the Commissioner of Public Works, to leave upon all unimproved streets, public alleys and highways surplus excavation and other spoil occasioned by the construction of said intercepting sewer, provided that the height to which such surplus excavation and other spoil may be deposited shall not exceed the elevation of the established grade of said streets, public alleys and highways. The public use of said streets, public alleys and highways within the said City of Chicago above specified shall not be unnecessarily interrupted or interfered with.

(g) That insofar as is practicable, said The Sanitary District of Chicago shall construct and maintain temporary bridges for both street and foot traffic until the pavements, walks and cross-walks removed or disturbed by reason of said work of excavation shall be restored to their former condition of usefulness.

(h) The said City of Chicago does hereby order and direct all persons, partnerships or corporations, who shall, at the time of the construction of said intercepting sewers, own, operate or maintain any conduits, wires, poles, pipes, gas mains, cables, steam and street railway tracks and equipment or other structures within any portion of the streets, public alleys and highways to be excavated in the construction of said intercepting sewers at his, its or their own expense to make such changes in the location of such conduits, wires, poles,

pipes, gas mains and cables, steam and street railway tracks and equipment or other structures as may be rendered necessary by the construction of said intercepting sewers.

(i) The Sanitary District of Chicago and its contractors are hereby given and granted the right to use in the construction of said intercepting sewers, dinkey engines and cars running on temporary tracks laid on the surface of said streets, public alleys and highways and may also use in said construction such steam shovels, hoisting engines and other plant and equipment as may be necessary for the complete construction of said work.

(j) That in all cases where it shall become and be necessary to remove, alter or repair water mains in the streets, public alleys and highways of the City of Chicago on account of the construction of said intercepting sewers, the Commissioner of Public Works is hereby authorized and directed to remove, alter or repair such water mains at the cost and expense of the water fund of the City of Chicago. In all cases where it shall become and be necessary that water service pipes be removed, cut off or damaged in any way on account of the construction of said intercepting sewers, The Sanitary District of Chicago is hereby authorized and directed to remove, alter or repair such water service pipes at its own cost and expense.

(k) The City of Chicago will, upon the complete construction of said intercepting sewers, by a proper and appropriate ordinance prohibit the discharge of any and all trade waste and sewage of any kind into the Calumet River, Lake Michigan and into Lake Calumet, wherever it is reasonable to require the discharge of such trade waste and sewage into an existing intercepting sewer system which does not in turn discharge its contents into either the Calumet River, Lake Michigan or Lake Calumet and will in said ordinance prescribe penalties for the violations of such ordinance.

(l) That the Commissioner of Public Works is hereby authorized and directed to issue, without fees or cost therefor, to The Sanitary District of Chicago or to any contractor to whom the work or any part thereof specified in this ordinance shall be awarded, all permits or licenses required for doing said work and shall not require from The Sanitary District of Chicago, the deposit of any sums of money now required under the ordinances of the City of Chicago for similar work and further, shall not require the payment by The Sanitary District of Chicago of any fees or salary for inspectors employed by the City of Chicago on said work.

SEC. 4. This ordinance shall be in force and effect from and after its passage and approval and the acceptance of the same by The Sanitary District of Chicago on or before sixty (60) days thereafter.

Approved as to form:

CHARLES E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

Approved as to legal descriptions:

PHILIP HARRINGTON,
Chief Draftsman.

Mr. Clark moved that the report be adopted and the accompanying order passed.

Yeas—Messrs. Carr, Clark, Lawley, Mueller, Nance and Paullin—Six.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a final certificate from the Chief Engineer that the work covered by the contract of the Chicago Bridge and Iron Com-

pany dated December 16, 1915 (page 1821 of the Proceedings) for furnishing fabricating and delivering to the Sanitary District the entire superstructure metal work for the highway bridges crossing the Calumet-Sag Channel on the line of Archer road, Western avenue, Division street, Ann street and Chicago street has been completed in accordance with all the terms and conditions of the contract and to the satisfaction of the Chief Engineer, except as to the time of completion. It appears from said final certificate that there was a default in time of ninety-three calendar days in the completion of said work which at $10.00 per day provided in said contract for each day's delay amounts to $930.00 which should be deducted from the amount of the final voucher.

Your Committee having read the final certificate of the Chief Engineer, hereto attached, and having had the matter under consideration is of the opinion that the sum of $930.00 should be deducted from the final payment due said contractor for the delays in question, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to pay to the Chicago Bridge & Iron Company upon the voucher of the Chief Engineer, the total sum of $914.40 now found to be due said Company under its said contract after deducting the said sum of $930.00 as above specified, upon the execution by said Company of a receipt in full of all claims and demands arising out of or resulting from the performance of the work under said contract, except as to said sum of $930.00 deducted from said final voucher and also upon the execution of an affidavit by an officer of said Company that all materialmen, mechanics and workmen employed by said Company have been paid in full; said payment, however, to be made subject to any unaccrued or unmatured obligations imposed by said contract.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

FINAL CERTIFICATE.

May 18, 1918.

Subject: Calumet-Sag Channel, Archer Road, Western Ave., Division St., Chicago St. and Ann St. Bridge Superstructures.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I transmit herewith final voucher in the amount of $914.40 to Chicago Bridge & Iron Company on its contract dated December 16, 1915 (pages 1821-1841 of Proceedings), for the furnishing, fabrication and delivery of metal work for the superstructures of the highway bridges across the Calumet-Sag Channel on the line of Archer Road in the Township of Lemont, and on the line of Western Avenue, on the line of Division Street, on the line of Ann Street and on the line of Chicago Street in the City of Blue Island. All work on this contract has been completed in accordance with all of the terms and conditions of the contract except as to the time of completion of the delivery of Western Avenue bridge.

Article 17 of the contract provides that the contractor shall complete the fabrication and delivery of the metal work for the superstructure of Western Avenue bridge delivered so that the work of erection could have been commenced on November 30, 1916, a default in time of 121 calendar days.

After the contract was executed, certain changes were made in the plans to provide supports for a 16-inch water pipe under the east sidewalk of the bridge, which changes caused additional work by the contractor, requiring some additional time to perform. The amount of the additional time required to do this work is difficult to determine, but I estimate that it did not exceed four weeks or twenty-eight (28) days, which allowance leaves a net default of ninety-three (93) days. The liquidated damages specified in the contract is $10.00 per day, making a total of $930.00.

The total amount due on the contract is $1.844.40, from which has been deducted $930.00 for liquidated damages, making the net amount due the contractor $914.40.

One extra bill is allowed in this contract for changing length of hand rail sections, amounting to $54.05.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

Recommended by:
C. R. DART,
Chief Bridge Engineer.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on July 17, 1919 (page 903 of the Proceedings), rejected the bid of the Sangamon County Coal Co., for furnishing coal screenings for the Thirty-ninth Street and Lawrence Avenue Pumping Stations for the reason that the coal furnished on trial did not equal the guarantee specified in the proposal of said bidder, and the Chief Engineer was authorized to purchase from the Sterling Midland Coal Company a sufficient number of cars of coal of the grade of coal offered in its bid to enable him to determine whether the proportions of moisture, ash and B. T. U.'s contained therein equaled the guarantee specified.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that said Sterling Midland Coal Company furnished eleven cars of coal for the Thirty-ninth Street Pumping Station but analyses of samples of said coal show that said coal does not equal the guarantee specified and he recommends that the bid for furnishing coal for said Thirty-ninth Street Pumping Station be rejected, but that said company be allowed to furnish another grade of coal for the Lawrence Avenue Pumping Station and have the same analyzed to determine whether said coal will equal the guarantee specified.

The Chief Engineer further recommends that the Bickett Coal & Coke Co., the next lowest bidder for furnishing said coal be allowed to furnish a number of cars of the grade of coal offered for the Thirty-ninth Street Pumping Station and that said coal be analyzed to determine its proportions of moisture, ash and B. T. U's per pound of dry coal and if said coal equals the guarantee specified, then a contract be entered into between the Sanitary District and said Bickett Coal & Coke Co. for all the coal advertised for said Thirty-ninth Street Pumping Station.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the bid of the Sterling Midland Coal Company for furnishing coal for the Thirty-ninth Street Pumping Station be, and the same is hereby, rejected for the reasons stated, and it is further

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to purchase from the Bickett Coal & Coke Co., a sufficient number of cars of coal for the Thirty-ninth Street Pumping Station of the grade of coal offered in its bid to enable him to determine by analyses whether the propor-

tions of moisture, ash and B. T. U.'s contained therein equal the guarantee specified and report the result of said analyses to the Board for action, and it is further

Ordered, That the check of the Sterling Midland Coal Company deposited with its bid for furnishing coal for the Thirty-ninth Street Pumping Station be returned to said company.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Electrical Development.

Mr. Clark presented the following report from the Committee on Electrical Development:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTEMEN—Your Committee on Electrical Development herewith presents contracts with the Indian Refining Company, 3200 South Western avenue, Chicago, Charles Hallenbach, 1317 South Oakley street, Chicago, the Midland Terra Cotta Company, 54th avenue and 16th street, Cicero and Arthur MacNeal, 3287 Oak Park avenue, Berwyn, George Draeger and David G. Boissoneau, Copartners, doing business under the firm name of Draeger and Boissoneau, 438 Western avenue, Blue Island, and Justus Brumer and J. T. Pritchard, doing business under the firm name of Brumer and Pritchard, 311 Western avenue, Blue Island, wherein the Sanitary District agrees to furnish and said parties agree to take electrical energy for the periods of time and upon the terms and conditions therein set forth. All of said contracts have been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contracts which have heretofore been executed by said parties.

Respectfully submitted,
WALLACE G. CLARK,
Vice-Chairman.
WM. J. HEALY,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Employment

Mr. Clark presented the following report from the Committee on Employment:

CHICAGO, August 7, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Police Department.

Robt. B. Culver, Engineer (Boat), $125.00 per month.

Illinois Valley Department.

R. A. Steinhagen, Junior Engineer, $175.00 per month.

Earle Waddle, Junior Engineer, $175.00 per month.

H. W. Wilkey, Launch Engineer, $150.00 per month.

G. A. Roderick, Photographer, $150.00 per month.

H. F. Powers, Rodman, $100.00 per month.

M. J. Hosty, Rodman, $100.00 per month.

A. E. Dobin, Rodman, $100.00 per month.

T. J. Mazzola, Rodman, $100.00 per month.

J. J. MacDonald, Rodman, $100.00 per month.

H. C. Mueller, Rodman, $100.00 per month.

A. Gerzen, Rodman, $100.00 per month.

Engineering Department.

J. A. Piersol, Sub-instrument man, $130.00 per month.

Sanford Olson, Chemical Assistant, $100.00 per month.

Thos. F. Kett, Rodman, $100.00 per month.

Chas. Weiland, Laborer, $96.00 per month.

Morgan Donohue, Laborer, 50 cents per hour.

John Mason, Laborer, 50 cents per hour.

George Coyne, Laborer, 50 cents per hour.

William O'Brien, Laborer, 50 cents per hour.

William Farley, Fireman, 60 cents per hour.

Electrical Department.

L. E. Zagers, Carpenter (Vacation period), 80 cents per hour.

Alvin O'Malley, Stenographer (Vacation period), $125.00 per month.

E. H. Barringer, Lineman, $165.00 per month.

John J. Kane, Groundman, $115.00 per month.

Ed. Lynch, Laborer, 50 cents per hour.

INCREASES.

Engineering Department.

D. F. Fleming, Assistant Mechanical Engineer, $175.00 per month to $225.00 per month.

Geo. F. Fitzgerald, Sub-instrument Man, at $130.00 per month to Instrument Man, at $150.00 per month.

Carl Newman, Rough Carpenter, at $4.50 per day, to Carpenter, at 70 cents per hour.

John Lally, Engineer in Charge, 39th St. Station, $250.00 per month to $300.00 per month.

James A. Shay, Engineer in Charge, Lawrence Ave. Station, $200.00 per month to $250.00 per month.

Hugh J. Gleason, Stationary Engineer, $150.00 per month to $205.00 per month.

Chris. J. Heaney, Stationary Engineer, $150.00 per month to $205.00 per month.

Thos. Lawlor, Stationary Engineer, $150.00 per month to $205.00 per month.

John A. Miller, Stationary Engineer, $150.00 per month to $205.00 per month.

Robt. Simpson, Stationary Engineer, $150.00 per month to $205.00 per month.

Dan Gleason, Stationary Engineer, $150.00 per month to $205.00 per month.

Theo. A. Schwartz, Stationary Engineer, $150.00 per month to $205.00 per month.

M. F. Schopf, Stationary Engineer, $150.00 per month to $205.00 per month.

Arthur Mercier, Stationary Engineer, $150.00 per month to $205.00 per month.

Jos. E. Smith, Boiler Washer, $110.00 per month to $140.00 per month.

Gustave Laga, Boiler Washer, $110.00 per month to $140.00 per month.

P. J. Lochner, Oiler, $110.00 per month to $140.00 per month.

Henry Kampf, Oiler, $110.00 per month to $140.00 per month.

John Szummarski, Oiler, $110.00 per month to $140.00 per month.

Matt. O'Connell, Oiler, $110.00 per month to $140.00 per month.

Patrick Coyle, Oiler, $110.00 per month to $140.00 per month.

Stanley Czerwinski, Oiler, $110.00 per month to $140.00 per month.

Andrew Haberzetle, Oiler, $110.00 per month to $140.00 per month.

John Buttny, Oiler, $110.00 per month to $140.00 per month.

Edward Naughton, Oiler, $110.00 per month to $140.00 per month.

C. E. McKeown, Oiler, $110.00 per month to $140.00 per month.

Bruno Salavano, Oiler, $110.00 per month to $140.00 per month.

Frank Dushek, Oiler, $110.00 per month to $140.00 per month.

Sigvard Olsen, Oiler, $110.00 per month to $140.00 per month.

Emil Dahms, Oiler, $110.00 per month to $140.00 per month.

Albert G. Selle, Fireman, $110.00 per month to $140.00 per month.

E. F. Coyne, Fireman, $110.00 per month to $140.00 per month.

George Finch, Fireman, $110.00 per month to $140.00 per month.

Adam Klein, Fireman, $110.00 per month to $140.00 per month.

William Flavin, Fireman, $110.00 per month to $140.00 per month.

Chas. J. Smith, Fireman, $110.00 per month to $140.00 per month.

Louis Bell, Fireman, $110.00 per month to $140.00 per month.

Fred Bergman, Fireman, $110.00 per month to $140.00 per month.

TRANSFER.

Electrical Department.

Daniel McAvoy, from Lineman at $165.00 per month to Lineman Foreman (Temporary), at $190.00 per month.

REINSTATEMENTS.

Due to Honorable Discharge from the U. S. Army Service.

Electrical Department.

Chas. J. Phalen, Lineman, $165.00 per month.

Chas. A. Drury, Meter Inspector, $140.00 per month.

Engineering Department.

Chas. Corso, Laborer, 50 cents per hour.

T. Pasevanto, Laborer, 50 cents per hour.

Harry O'Neil, Laborer, 50 cents per hour.

Harry Giblin, Laborer, 50 cents per hour.

Arthur Hennessey, Laborer, 50 cents per hour.

John Regan, Laborer, 50 cents per hour.

Police Department.

Maurice O'Malley, Patrolman, $115.00 per month.

Respectfully submitted,
GEORGE W. PAULLIN,
Chairman.
WALLACE G. CLARK,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Clark moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

NEW BUSINESS.

Mr. Lawley moved that when this meeting of the Board of Trustees adjourns it adjourn to meet again on Tuesday, August 12, 1919, at 2 o'clock P. M., at its usual place of meeting.

The motion prevailed.

Payroll of The Sanitary District of Chicago for the Month of April, 1919.

BOARD OF TRUSTEES.

Charles H. Sergel, 4578 Oakwood Ave., President of Board	$ 625.00
Wm. J. Healy, 716 W. Madison St., Trustee	416.66
Harry E. Littler, 2505 N. Washtenaw Ave., Trustee	416.66
Willis O. Nance, 30 N. Michigan Ave., Trustee	416.66
Wallace G. Clark, 30 N. Michigan Ave., Trustee	416.66
George W. Paullin, 30 N. Michigan Ave., Trustee	416.66
Patrick J. Carr, 3508 S. Western Ave., Trustee	416.66
James H. Lawley, 1925 W. Chicago Ave., Trustee	416.66
Matthias A. Mueller, 5017 S. Wood St., Trustee	416.66
Wm. B. Foley, 819 Independence Blvd., Secretary to President	291.67
Total	$ 4,249.95

DEPARTMENT OF CLERK OF THE DISTRICT.

Clerical and Paymaster's Division

John McGillen, 2136 Cleveland Ave., Clerk of Board	$ 566.67
Thomas J. Whalen, 7941 So. May St., Committee Clerk	200.00
Josephine M. Ryan, 1830 Warren Ave., Stenographer and Secretary	150.00
Bryan Hartnett, 3518 S. Washtenaw Ave., Stenographer	150.00
D. E. Fitzgerald, 2442 N. Albany Ave., Paymaster	200.00
Lillian Keeley, 2816 N. Francisco Ave., Stenographer and Clerk	110.00
Elizabeth Miller, 3616 Ainslie St., Vault Clerk	150.00
Thomas O'Grady, 835 W. 54th Pl., Mail and Utility Clerk	100.00
Felix Quigley, 2250 Larrabee St., Clerk	95.00
Agnes Maloney, 835 W. 47th Pl., Chief Phone Operator	100.00
H. M. Christie, 2128 S. Lawndale Ave., Accountant	300.00
Jessie W. Shantz, 1002 Greenleaf Ave., Wilmette, Ill., Counter Clerk	175.00
Daniel Huguenin, 920 Ardrie Pl., Superintendent of Efficiency	225.00

Accounting and Record Division

George J. Miller, 3000 S. Wells St., General Accountant	350.00
Wm. F. O'Connell, 208 E. 60th St., Cost Record Clerk	200.00
Jas. J. Mulcahey, 7914 Champlain Ave., Disbursing Record Clerk	160.00
Chas. Dingee, 912 Lake Ave., Wilmette, Ill., Warrant and Voucher Record	160.00
G. A. Kelly, 2049 W. Ohio St., Budget Bookkeeper	200.00
Jewel L. Walsh, 542 W. 65th St., Stenographer	125.00
Jas. H. Cameron, 1902 Jackson Blvd., Budget Clerk	125.00
Francis J. Sullivan, 2422 W. Superior St., Budget Clerk	125.00
Winifred Ronayne, 3402 Fulton St., Key Punch Operator	85.00

Purchasing Division.

Frank O'Gorman, 5042 Champlain Ave., Order Clerk	175.00
Stephen J. Reagan, 1620 W. 34th St., Bookkeeper	135.00
John A. Parker, 3333 Emerald Ave., Clerk	125.00
Helen Shine, 1118 W. Garfield Blvd., Stenographer	100.00

Cashier's Division.

Charles O'Leary, 5705 Union Ave., Cashier	125.00

Temporary Employe.

Seymour Davis, 515 W. 78th Pl., Warrant and Voucher Receiving Clerk 22 days	77.00
Total	$ 4,788.67

DEPARTMENT OF THE TREASURY.

George M. Reynolds, 208 S. La Salle St., Treasurer	$ 208.33

DEPARTMENT OF REAL ESTATE.

Irene Mueller, 5017 S. Wood St., Secretary-Stenographer	135.00
Walter F. Kraft, 9832 Ewing Ave., Investigator	125.00
Total	$ 260.00

DEPARTMENT OF LAW.

C. Arch Williams, 4536 Drexel Blvd., Attorney	833.33
Ross C Hall, 309 S. Scoville Ave., Oak Park, First Asst. Attorney	583.33
Walter E. Beebe, 4069 Oakland Crescent, Illinois Valley Attorney	500.00
James S. Handy, 5221 Blackstone Ave., Asst. Attorney	500.00
W. C. Asay, 5553 Wayne Ave., Asst. Attorney	500.00
Chas. E. Anthony, 911 Ainslie St., Asst., Attorney	541.67
James M. Slattery, 1522 Farwell Ave., Asst. Attorney	400.00
John F. Bolton, 3417 Lowe Ave., Asst. Attorney	400.00
Joseph A. Culkin, 4166 Clarendon Ave., Asst. Attorney	250.00
John H. McAuliffe, 5535 W. Quincy St., Asst. Attorney	275.00
H. G. Immenhausen, 162 W. Superior St., Asst. Attorney	250.00
George H. Hough. 500 Diversey Pkwy., Asst. Attorney	250.00
A. A. Bach, 6005 S. La Salle St., Law Clerk	200.00
Matilda M. Lynn, 5343 Kenmore Ave., Stenographer and Voucher Clerk	125.00
Miriam Ehrlich, 3129 Park Ave., Stenographer	125.00
Catherine O'Reilly, 4125 West End Ave., Stenographer	110.00
John C. Abens, 1743 Hammond St., Investigator	125.00
Charles W. Neubauer, 1321 Roscoe St., Chief Stenographer	175.00
Graham B. Trainer, 5202 Cornell Ave., Messenger	85.00
George Neupert, 75 W. Jackson Blvd., Investigator	175.00
J. Walter Nielsen, 2204 Kimball Ave., Docket Clerk	125.00
Francis Rodney, 537 E. 34th St., Stenographer	110.00
Lillian Gottschalk, 2505 N. Washtenaw Ave., Stenographer	125.00
Total	$ 6,763.33

DEPARTMENT OF POLICE.

Wm. E. Carter, 829 Simpson St., Evanston, Ill., Marshall	250.00
Joseph Kennefick, 3813 Wallace St., Sergeant	135.00
James Haggerty, 3201 Princeton Ave., Sergeant	135.00
Emil Wanderer, 1952 W. 22nd Pl., Sergeant	135.00
Lawrence Carroll, 3639 S. Leavitt St., Patrolman	125.00
Emil Klank, 4616 S. Western Ave., Patrolman	125.00
Fred W. Schuett, 2026 Pratt Ct., Evanston, Patrolman	125.00
Tony Alessi, 2547 Wallace St., Patrolman, 5 days	20.83
John Conlon, 360 Wendel St., Patrolman	125.00
Wm. Wittlieb, 6636 S. Laflin St., Patrolman	125.00
A. S. Frodin, 5918 S. Union Ave., Patrolman	125.00
Thomas F. Lesniak, 3101 Bernard St., Patrolman	125.00
Wm. Sweitzer, 2307 Washington Blvd., Patrolman	125.00
Frank J. Schmidt, Jr., 1849 Hudson Ave., Patrolman	125.00
Hilmer Holm, 5748 S. Morgan St., Patrolman	125.00
George W. McPherson, 3524 S. Hoyne Ave., Patrolman	125.00
Adolph Sundmacher, 1214 Mariana St., Patrolman	125.00
Herman F. Heinecke, 70 New St., Blue Island, Patrolman	125.00
John E. Pierce, 4080 S. Wells St., Patrolman	125.00
James Mooney, 3450 Walnut St., Patrolman	125.00
Wm. L. Koerner, 7433 Ingleside Ave., Patrolman	125.00
Charles A. Ison, 5926 S. Wood St., Patrolman	125.00
Ernest A. Wendt, 1637 N. Maplewood Ave., Patrolman	125.00
Ernest H. Schultz, 2859 N. Robey St., Patrolman	115.00
Frank Kouba, 656 W. 18th St., Patrolman	115.00
N. C. Van Slooten, 2103 N. Karlov Ave., Patrolman	100.00
Edward Marose, 2622 S. Trumbull Ave., Patrolman	100.00
William Brown, 2838 S. State St., Patrolman	115.00
Walter Hawkins, 3927 Federal St., Patrolman	115.00
Jos. Kruppa, 1453 Emma St., Patrolman	125.00
George Kirwan, 324 N. Michigan Ave., Patrolman	115.00
George A. Keller, 2820 Warren Ave., Patrolman	115.00
J. T. Johnson, Lemont, Ill., Patrolman	115.00
Barney Klecka, 1853 S. Western Ave., Patrolman	115.00

Chas. R. Fross, 801 E. 41st St., Patrolman	115.00
Michael Conway, 1944 N. Lincoln St., Patrolman	115.00
Jos. W. Doratis, 10455 S. Michigan Ave., Patrolman	100.00
Fred O. Wolff, 2023 Superior St., Patrolman	100.00
Jas. Hughes, 1836 N. Paulina St., Patrolman	125.00
Frank J. Raetzke, 2701 S. Karlov Ave., Patrolman	100.00
Frank L. Sequeens, 4847 S. Loomis St., Patrolman	100.00
Louis J. Christianson, 4335 Fullerton Ave., Patrolman	100.00
Edw. R. Hruby, 1528 S. Kenneth Ave., Patrolman	100.00
Walter Richards, 3017 Fulton St., Patrolman	100.00
H. M. Legel, 918 N. Fairfield Ave., Patrolman	100.00
W. Paine, 210 Honore St., Patrolman	100.00
W. E. Kroger, 4453 Bernard Ave., Patrolman	100.00
Total	$ 5,525.83

DEPARTMENT OF ILLINOIS & MICHIGAN CANAL AND ILLINOIS RIVER CONDITIONS.

E. H. Heilbron, 3642 Greenview Ave., Illinois Valley Engineer	$ 550.00
D. H. Dugan, Chillicothe, Ill., Asst. Engineer	300.00
W. J. Powers, 3125 Warren Ave., Sub Asst. Engineer	200.00
O. W. Boers, Chillicothe, Ill., Sub Asst. Engineer	200.00
H. T. Burkitt, 777 Linden Ave., Hubbard Woods, Instrumentman	160.00
W. T. McCanna, 2922 Parnell Ave., Draftsman	130.00
L. H. Welcome, 552 W. 35th St., Rodman	115.00
John Markham, 1243 Foster Ave., Chicago, Ill., Watchman	100.00
Total	$ 1,755.00

Gauge Readers.

Joseph Ebner, 206 Bridge St., Joliet, Ill., Gauge Reader	$ 7.00
Frank Seaborg, R. F. D. No. 3, Joliet, Ill., Gauge Reader	6.00
Mrs. Geo. Jennings, Elwood, Ill., Gauge Reader	7.00
Joseph Limaeher, Minooka, Ill., Gauge Reader	6.00
William E. O'Brien, R. F. D. No. 1, Morris, Ill., Gauge Reader	6.00
William Carnegie, R. F. D. No. 1, Morris, Ill., Gauge Reader	6.00
M. Brumbach, La Salle Co. Asylum, Ottawa, Ill., Gauge Reader	6.00
Sam G. Belt, 1006 Calhoun St., Morris, Ill., Gauge Reader and Water Sampler	11.00
John Brookman, Seneca, Ill., Gauge Reader	6.00
George A. Campbell, Marseilles, Ill., Gauge Reader	6.00
Noah Morial, Marseilles, Ill., Gauge Reader	6.00
Harry Buckles, R. F. D. No. 3, Lewiston, Ill., Gauge Reader	6.00
James McGrogan, Dayton, Ill., Gauge Reader	7.00
C. H. Barnard, C. B. & Q. Elevator, Ottawa, Ill., Gauge Reader and Water Sampler	11.00
George F. Keeley, Wilmington, Ill., Gauge Reader	6.00
Bernhard Fidler, R. R. 24 La Salle, Ill., Gauge Reader	7.00
Peter De Groot, Peru, Ill., Water Sampler and Gauge Reader	11.00
Henry Harbeck, Utica, Ill., Gauge Reader	6.00
David Gleason, DePue, Ill., Gauge Reader	6.00
J. F. Eckard, Hennepin, Ill., Gauge Reader	6.00
Philip Riley, Lacon, Ill., Gauge Reader	6.00
Jesse Tuthill, Chillicothe, Ill., Gauge Reader	6.00
Robert Wilson, R. F. D. No. 4, Peoria, Ill., Gauge Reader	6.00
Miss Elizabeth Blessing, R. F. D. No. 34, Peoria, Ill., Gauge Reader	6.00
Clinton D. Warren, Liverpool, Ill., Gauge Reader	6.00
J. F. Fletcher, Kingston Mines, Ill., Gauge Reader	6.00
William LeTissier, Bath, Ill., Gauge Reader	6.00
W. L. Waters, Browning, Ill., Gauge Reader	6.00
Miss Marie Long, R. R. No. 3, Wilmington, Ill., Gauge Reader	6.00
James W. Blair, R. F. D. No. 1, Pekin, Ill., Gauge Reader	6.00
Total	$ 199.00

DEPARTMENT OF ENGINEERING.

General Engineering Division.

G. M. Wisner, 4715 Greenwood Ave., Chief Engineer	$ 916.66
E. J. Kelly,429 Briar Pl., Asst. Chief Engineer	750.00
H. P. Ramey, 6854 Harper Ave., Division Engineer	416.66
Philip Harrington, 500 Diversey Parkway, Division Engineer	416.66
Murray Blanchard, 4355 Lake Park Ave., Assistant Engineer	250.00
E. L. Cooley, 2136 Indiana Ave., Hyd. Engineer	275.00
Edw. L. Lahey, 4409 Racine Ave., Resident Engineer	200.00
Jas. T. O'Connor, 3505 N. Herndon St., Res. Engineer	200.00
J. T. Soderstam, 1211 Newport Ave., Draftsman	175.00
Fred W. Kirk, 68 E. 56th St., Draftsman	175.00
M. P. Williams, 3905 Van Buren St., Draftsman	175.00
R. G. Galke, 1834 Eddy St., Draftsman	175.00
A. C. Paterson, 223 N. Fairfield Ave., Photographer	160.00
Nellie McArdle, 8019 Green St., Stenographer	125.00
George D. Gallagher, 4252 W. Adams St., Chauffeur	125.00
Lewis H. Gray, 3933 N. Keeler Ave., Draftsman	140.00
Edwin S. Crowe, 2318 N. Kenneth Ave., Tracer	100.00

Bridge Division.

C. R. Dart, 706 Greenleaf Ave., Wilmette, Ill., Chief Bridge Engineer	600.00
S. T. Smetters, 6018 Stony Island Ave., Asst. Bridge Engineer	333.33
Ingolf Erdal, 1506 S. 4th Av., Maywood, Bridge Designer	225.00
Edwin A. Howes, 5304 Windsor Ave., Bridge Designer	225.00
Fred Hedberg, 2852 N. Sawyer Ave., Bridge Designer	225.00
Richard DeYoung, 10226 State St., Bridge Designer	225.00
Ray C. Brown, 1249 Foster Ave., Draftsman	200.00
A. M. Finkel, 1610 S. Turner Ave., Tracer	150.00
Stanley A. Jankowski, 3222 Wall St., Bridge Tracer	130.00
F. E. Helmick, 946 W. 59th St., Sub Instrument Man	130.00

Record Division.

W. T. Lynch, 5643 Wayne Ave., Record Clerk	200.00
Theodore Buskirk, 3903 Ellis St., Junior Engineer	175.00
Thomas J. Welsh, 3510 Lowe Ave., Cost Clerk	175.00
Edward M. Myers, 849 N. Robey St., Sub Instrument Man	130.00
James J. Heffernan, 1624 Grand Ave., Sub Instrument Man	130.00
E. Edinger, 200 E. 33rd St., Asst. Receiving Clerk	130.00
Geo. W. Schmidt, 1143 Oakdale Ave., Computer	120.00
Gertrude Scharlau, 4231 N. Whipple St., Stenographer	110.00
John Brunton, 5072 Lincoln Ave., Computer	120.00
Elaine Slossman, 4842 Forestville Ave., Stenographer	110.00
Total	$ 8,618.31

Channel Maintenance Division.

Wm. Sullivan, 3821 Van Buren St., Division Engineer	$ 333.33
Jos. P. Moore, 4360 S. Wells St., Instrument Man	150.00
Wm. Henry, 806 N. State St., Sub Instrument Man	130.00
Frank Palermo, 7037 Hermitage Ave., Launch Engineer	125.00
John Murphy, 3740 Emerald Ave., Rodman	115.00
Jos. J. Kelly, 3155 Union Ave., Rodman	115.00
Rudolph Christoph, 2159 Melrose St., Supt., 15 days	82.50
Total	$ 1,050.83

Sanitary Division.

Langdon Pearse, 5435 Hyde Park Blvd., Sanitary Engineer	$ 550.00
L. C. Whittemore, 1216 E. 54th St., Asst. Sanitary Engineer	275.00
F. W. Mohlman, 4137 Drexel Ave., Chemist, 14 days	116.67
O. L. Eltinge, 5144 Hyde Park Blvd., Asst. Engineer	225.00

E. R. Richards, 8225 S. Wabash Ave., Draftsman	150.00
John R. Palmer, 550 Elmwood Ave., Evanston, Ill., Asst. Chemist	150.00
P. E. Connor, 712 Ash St., Winnetka, Ill., Resident Engineer	200.00
Mary Donegan, 3538 W. Monroe St., Stenographer	110.00
E. H. Morgan, 15418 Loomis St., Harvey, Asst. Chemist	150.00
Wm. G. Knaus, 918 N. Washtenaw Ave., Draftsman	150.00
Frank O'Rourke, 744 W. 54th Pl., Filter Attendant	110.00
Daniel Daly, 3618 S. Halsted St., Filter Attendant	110.00
Neil Galvin, 3155 Wallace St., Filter Attendant	110.00
John Sowadski, 2812 Bonfield St., Laboratory Assistant	110.00
Thomas O. Burgess, Hyde Park Y. M. C. A., Asst. Chemist	125.00
Nelson J. Gothard, 340 E. 56th St., Asst. Chemist	150.00

Mechanical Division.

Homer I. Steffa, 5460 Ferdinand St., Mechanical Designing Engineer	275.00
Arthur A. Bleau, 3141 Princeton Ave., Asst. Opr. Engineer	150.00
William A. Dundas, 5521 Sangamon St., Asst. M. Engineer	175.00
D. P. Fleming, 5959 Superior St., Asst. M. Engineer	175.00
Total	$ 3,566.67

Sewer Construction Division.

R. H. Burke, 11240 S. Irving St., Division Engineer	416.66
H. S. Ripley, Worth, Ill., Asst. Engineer	225.00
L. B. Barker, 550 E. 50th Pl., Asst. Engineer	225.00
J. P. Gallagher, 3759 S. Washtenaw Ave., Asst. Engineer	225.00
Norman Newlands, 4902 N. Albany Ave., Res. Engineer	200.00
N. R. Herlihy, 2743 N. Albany Ave., Junior Engineer	175.00
Jos. Moroney, 4608 Marshfield Ave., Watchman	96.00
Gibson E. Gorman, 2731 W. 35th St., Sub-Instrument Man	130.00
J. W. Beckstrom, 2821 Thayer St., Evanston, Computer	120.00
Wm. J. Hahn, 1514 Elmwood Ave., Evanston, Computer	120.00
Matthew Smith, 1206 W. 13th St., Rodman	115.00
Herman B. Klahre, 212 W. Ohio St., Sub-Instrument Man	130.00
Robert Gilmartin, 3303 S. Seeley Ave., Computer	120.00
Edward H. Boddy, 241 N. Wood St., Rodman	115.00
Daniel A. Hayes, 2248 W. Superior St., Rodman	115.00
George T. Giles, 4862 Winthrop Ave., Rodman	115.00
Richard Friend, 1709 Adams St., Rodman	115.00
Jos. Siebert, Jr., 1242 W. 31st St., Rodman	115.00
Axel Brandting, 5830 Broadway, Rodman	115.00
Martin L. Costello, 447 W. 42nd Pl., Rodman	115.00
Louis E. Legner, 2929 N. Albany Ave., Instrument Man	150.00
P. J. Whalen, 4816 Union Ave., Rodman	115.00
J. J. O'Reilley, 3805 N. Crawford Ave., Rodman	115.00
Thos. J. Mooney, 1800 So. Clifton Ave., Rodman	115.00
Richard Boegelsack, 10522 Avenue M, Rodman	115.00
J. J. Savage, 407 S. Throop St., Rodman	115.00
James I. Kane, 1900 W. 35th St., Rodman	115.00
Louis Hieden, Jr., 1245 Clybourn Ave., Rodman	115.00
Thos. McGrath, 454 Root St., Rodman, 23 days	76.67
Wm. J. Bonn, 1342 W. Garfield Blvd., Sub-Instrumentman	130.00
J. L. Malkowski, 947 W. Chicago Ave., Sub-Instrumentman	130.00
Martin P. Riley, 9017 Commercial Ave., Computor	120.00
John Richards, 2641 Princeton Ave., Rodman	115.00
Jno Witt, 2057 W. 21st Pl., Rodman	115.00
Henry Altman, 7000 Laflin Pl., Rodman	115.00
Michael Gunnip, 5418 Loomis St., Rodman	115.00
Thos. Burk, 224 Beethoven Pl., Rodman	100.00
Total	$ 5,074.33

Blue Island Channel Construction Division.

W. H. Trinkaus, 708 N. May St., Asst. Engineer	$ 225.00
Benjamin J. Curtis, 473 Elm St., Blue Island, Resident Engineer	200.00
John Jones, 297 Walnut St., Blue Island, Sub Instrumentman	130.00
Walter P. Creech, 6958 Prairie Ave., Sub Instrumentman	130.00
Patrick J. Donahue, 1206 W. 63rd St., Inspector	115.00
Maurice J. Powers, 3621 Union Ave., Rodman	115.00
Edward E. Bochmann, 473 York Pl., Blue Island, Sub-Instrument Man	130.00
Robert Ermschler, 836 Prospect Ave., Blue Island, Watchman	96.00
W. A. Grundy, 2043 Ogden Ave., Inspector	125.00
Total	$ 1,266.00

Sag Channel Construction Division.

John D. Hurley, Willow Springs, Asst. Engineer	$ 225.00
Leonard Pickley, 831 W. 53rd St., Sub Instrumentman	130.00
Matt. J. Murphy, 1235 W. Harrison St., Sub-Instrument Man	130.00
Richard F. Kelly, 4442 So. Sawyer Ave., Sub Instrument Man	130.00
Arthur J. Youngberg, 1408 Melrose St., Rodman	115.00
Geo. Parker, 1816 Prairie Ave., Computer	120.00
John Scanlon, 2106 W. 35th St., Watchman	96.00
Edwin Lyons, 3036 Shields Ave., Rodman	100.00
Wm. Allen, 1224 W. 32nd St., Rodman	115.00
Carmine Laurino, 909 S. State St., Rodman	115.00
Total	$ 1,276.00

Gauge Readers.

H. Brooks, Riverside, Ill., Gauge Reader	$ 10.25
B. E. Monville, U. S. Life Saving Station, Station I. C., Gauge Reader	10.00
J. J. Jeans, Willow Springs, Ill., Gauge Reader	5.25
I. N. Collett, Riverdale, Ill., Gauge Reader	5.25
Mrs. H. Wartman, North Harvey, Ill., Gauge Reader	5.00
Total	$ 35.75

THIRTY-NINTH STREET PUMPING STATION.

John Lally, 605 W. 31st St., Engineer in Charge	$ 250.00
Hugh J. Gleason, 3357 Calumet Ave., Engineer	150.00
Christopher J. Heaney, 7529 Yale Ave., Engineer	150.00
Thomas Lawler, 4444 N. Whipple St., Engineer	150.00
Robert Simpson, 30 S. Whipple St., Engineer	150.00
Max Nork, 4428 S. Albany Ave., Machinist, 192 hours	163.20
Henry Schramm, 1656 N. Keeler Ave., Millwright	140.00
Wm. Flavin, 3146 S. Canal St., Fireman	110.00
Chas. J. Smith, 2540 Emerald Ave., Fireman	110.00
Louis Bell, 547 W. 31st St., Fireman	110.00
Arthur Mercier, 11531 Perry Ave., Oiler	110.00
J. W. Farrell, 3761 Grand Blvd., Oiler	110.00
John A. Miller, 2543 N. Racine Ave., Stationary Engineer	150.00
Jos. Runnella, 455 W. 25th Pl., Laborer	96.00
Jos. Vengler, 6429 S. Peoria St., Craneman, 26 days	182.00
Joe Ranctre, 2512 Lowe Ave., Laborer	96.00
Sigvard Olson, 2525 Haddon Ave., Oiler, 27 days	99.00
Daniel Gleason, 848 Rush St., Mech. Engineer	150.00
D. Clark, 4741 Dearborn St., Laborer, 21 days	67.20
Louis Barzen, 2810 S. Wells St., Laborer	96.00
Andrew Haberzetle, 2607 S. Halsted St., Fireman, 20 days	73.33
Edward Naughton, 6820 Evans Ave., Oiler	110.00
Frank J. Dushek, 3232 Wallace St., Oiler	110.00
Piza Littlestone, 2629 Evergreen Ave., Oiler	3.67
Samuel Vanderweil, 24 E. 99th Pl., Laborer	96.00
Arthur LaBeau, 5524 Winchester Ave., Laborer	96.00
Frank Belcastro, 2454 W. Huron St., Laborer	96.00
James Roach, 2949 Lyman St., Laborer	96.00

John Buttny, 3755 Hermitage Ave., Laborer	96.00
Fred Bergman, 6616 S. Robey St., Fireman	110.00
Michael Walsh, 6034 Harper Ave., Laborer	96.00
A. F. Ulbrich, 762 Congress St., Laborer, 15 days	48.00
Michael Maloney, 2443 W. 34th St., Laborer	96.00
Joseph Genero, 308 W. 27th St., Laborer	96.00
Thomas McCartan, 1317 W. 98th St., Steam Fitter, 24 days	168.00
Patrick Holland, 4156 Wells St., Steam Fitter, 24 days	168.00
Bruno Salarno, 2522 Lowe Ave., Oiler	110.00
Chas. Heintz, 215 W. 22nd St., Laborer	96.00
Gustave Laga, 3828 S. Honore St., Boiler Washer	110.00
E. J. Ryan, 2715 Emerald Ave., Oiler	110.00
Jos. Marchacek, 2001 18th Pl., Laborer	96.00
Emil Dahms, 3715 So. Honore St., Laborer	96.00
Sam Stewart, 5234 State St., Laborer, 8 days	25.60
Total	$ 4,842.00

LAWRENCE AVENUE PUMPING STATION.

James A. Shay, 5300 S. Peoria St., Engineer in Charge	200.00
Pat Grady, 835 W. 54th Pl., Laborer	96.00
Jos. McGuire, 2612 Fullerton Ave., Laborer	96.00
M. F. Schopf, 1107 Wrightwood Ave., Stationary Engineer	150.00
Stanley Czerninski, 2062 N. Robey St., Oiler	110.00
Matt. O'Connell, 3520 Union Ave., Laborer	96.00
Tho. Schwartz, 1607 Jackson Blvd., Engineer	150.00
P. J. Lockner, 1941 N. Francisco Ave., Oiler	110.00
Henry Kampf, 2144 Warner Ave., Oiler	110.00
Albert G. Selle, 429 N. Sawyer Ave., Fireman	110.00
Frank Schopf, 1107 Wrightwood Ave., Stat. Engineer	150.00
Adam Klein, 2745 Ward St., Fireman	110.00
John Sampson, Lawrence Ave. Crib, Crib Keeper	100.00
Steve Carmody, 5344 Lowe Ave., Fireman	110.00
T. J. Reaney, 3838 Park Ave., Laborer	96.00
George Sitts, 1471 Grand Ave., Laborer	96.00
Chas. Stuebner, 346 31st St., Laborer	96.00
John Cameron, 3644 S. Marshfield Ave., Steam Fitter, 24 days	168.00
Jno. S. Zumnarski, 1740 Brigham St., Laborer	110.00
Alex. Kluczuski, 2443 W. 34th Pl., Laborer	96.00
Total	$ 2,360.00

Survey North Branch Chicago River, Account Sewerage Disposal Plant.

Walter H. Faget, 3565 W. Van Buren St., Jr. Engineer	175.00
James L. Hackett, 4932 Forrestville Ave., Jr. Engineer	175.00
Rudolph Christoph, 2159 Melrose St., Superintendent, 15 days	82.50
Wm. J. Jaeger, 3028 Emerald Ave., Sub-Instrument Man	130.00
Geo. F. Fitzgerald, 189 Walnut St., Blue Island, Sub-Instrument Man	130.00
Milton J. Kman, 5214 Lowe Ave., Rodman	115.00
James J. Ryan, 3729 Emerald Ave., Rodman	115.00
Clarence E. Wilson, 2817 N. Clark st	115.00
Chas. McMorrow, 6817 Wabash Ave., Rodman	115.00
Total	$ 1,352.50

LOCK, DAM AND BRIDGE TENDER.

M. J. Ryan, Lockport, Ill., Dam Tender	$ 125.00
J. Riordan, Lemont, Ill., Asst. Dam Tender	100.00
Henry Lawlor, Lockport, Ill., Bridge Tender	100.00
James O'Connor, Lockport, Bridge Tender	100.00
Otto Hartman, Lockport, Ill., Asst. Dam Tender	115.00
Thos. O'Leary, Lockport, Ill., Asst. Dam Tender	100.00
J. McDonald, Lockport, Ill., Bridge Tender	100.00
Wm. Fleming, 226 Hacker Ave., Joliet, Ill., Asst. Dam Tender	100.00
F. W. Worst, 121 E. 10th St., Lockport, Ill., Asst. Dam Tender	100.00
Total	$ 940.00

ELECTRICAL DEPARTMENT.

Executive Division.

G. S. Brack, 540 Oakdale Ave., Electrical Engineer	$ 500.00
Mae Watson, 6443 Peoria St., Stenographer	125.00

Accounting Division.

B. S. Riedle, 5524 S. Winchester Ave., Auditor	250.00
P. J. Costello, 3129 Wallace St., Chief Clerk	175.00
M. M. Bunyan, 3426 Union Ave., Accounts Clerk	150.00
C. W. Strook, 418 15th Ave., Maywood, Bookkeeper	150.00
Marie Reardon, 7002 Laflin St., Record Clerk	140.00
May Broderick, 4208 Adams St., Stenographer	125.00
Harriett McAuley, 1343 W. Garfield Blvd., Voucher Clerk	125.00
J. Jones, 297 Walnut St., Blue Island, Ill., M. & S. Clerk	135.00
Frank P. McGovern, 219 W. 23rd St., Clerk	125.00
Allan J. King, 2627 W. Monroe St., Clerk	125.00
Samuel A. Cohen, 4517 Calumet Ave., Clerk	125.00
Walter J. Merritt, 513 S. Leavitt St., Ledger Clerk	125.00
Geo. Bachelder, 4600 Troy St., Clerk	125.00
Walter F. Kuhneman, 6353 Sangamon St., Clerk	125.00
John Conlon, 3343 Lowe Ave., Office Asst.	75.00
Clarence F. Reich, 2703 N. Ashland Ave., Clerk	125.00
E. J. Nathanson, 2126 Orchard St., Clerk	125.00
Geo. F. Lambin, 3222 Osgood St., Clerk	125.00
Leo. J. Feeney, 8942 S. Laflin St., Messenger	60.00
Frank Eckert, 2718 N. Talman Ave., Ledger Clerk	125.00
H. I. Stephens, 65 New St., Blue Island, Ill., Clerk	75.00
Harry A. Steinmyer, 1928 Spaulding Ave., Ledger Clerk	125.00

Storeroom.

J. Reuhmann, 6544 S. Lincoln St., Storekeeper	150.00
John P. Cullen, 3910 S. Western Ave., Storekeeper Clerk	125.00
J. B. Kean, 754 W. 54th St., Warehouseman	100.00
Michael Bell, 7927 S. Morgan St., Warehouseman	100.00
Chas. Trouth, 2929 Wentworth Ave., Watchman	96.00
W. Kamberg, 5044 So. Marshfield Ave., Material and Tool Clerk, one month 4 days	141.13
Chas. Busch, 56 E. 100th St., Watchman	96.00

Contract Division.

James Le Gro, 827 E. 46th St., Contract Agent	200.00
F. F. Anderson, 4710 Winthrop Ave., Inspector	175.00

Architectural Division.

F. L. Barrett, 4354 N. Keeler Ave., Architect	300.00
Fred Meyer, 3510 Broadway, Draftsman	150.00
B. H. Young, 4209 Indiana Ave., Carpenter, 184 hours	147.20
C. R. Lyons, 3036 Shields Ave., Carpenter, 28 hours	22.40
J. C. Kraiss, 3327 S. Hamilton Ave., Painter, 184 hours	161.00

Engineering Division.

G. F. Maddox, 4442 Magnolia Ave., Draftsman	200.00
Chas. Raymond, 3841 Monroe St., Clerk	125.00
W. B. Lambe, 1414 E. 53rd St., Inspector and Appraiser	150.00
John Miller, 4449 Lowe Ave., Draftsman	175.00

Testing Division.

F. A. DeMuth, 4929 W. 23rd St., Testing Engineer	215.00
C. E. Jay, 3906 N. Sawyer Ave., Electrician	165.00
H. E. Burket, 17 E. Ohio St., Electrician	155.00
E. P. Spreigel, 2451 Station St., Electrician	155.00
R. L. Walsh, 4445 Ellis Ave., Electrician	155.00
C. D. Case, 1024 Belden Ave., Electrician, 21 days	108.50
R. C. Pedrick, 2418 W. 36th St., Electrician	155.00
H. Hullinger, 1222 W. 31st St., Electrician Helper	130.00
J. L. Collins, 4838 Kammerling Ave., Electrician Helper	130.00

Meter Division.

William Krippes, 864 Wellington Ave., Superintendent of Meters	215.00
G. C. Cassard, 4025 Clarendon Ave., Meter Inspector	165.00
George Enright, 1439 W. Marquette Road, Meter Inspector	140.00
W. E. Jones, 4631 Lake Park Ave., Meter Inspector	140.00
Wm. Frost, 3800 Wallace St., Meter Inspector Helper	115.00
W. Ruehrdanz, 3740 N. Claremont Ave., Meter Reader	140.00
Edw. Downs, 3055 Poplar Ave., Meter Inspector	140.00
Fred. Kroplorski, 1843 W. 17th St., Meter Inspector Helper	115.00

Operating Division.

W. J. Moore, 4942 N. Spaulding Ave., Operating Engineer	300.00
A. T. Weatherwax, 6340 Normal Blvd., Asst. Engineer	240.00
Emil A. Nitz, 5600 Honore St., Payroll and Record Clerk	125.00
Robert J. Klaiber, 722 South Blvd., Evanston, Stenographer and Clerk	125.00
Lauretta Ryan, 340 So. Crawford Ave., Telephone Operator, 3 days	8.50
Jas. A. Haggerty, 3552 Van Buren St., Draftsman	125.00
P. Fitzgerald, 2921 Union Ave., Laborer, 237 hours	106.65
T. O'Connell, 3729 Union Ave., Laborer, 240 hours	108.00
Grace Lenz, 755 Bowen Ave., Temporary Telephone Operator, 2 days	5.67
J. P. Lynch, 2842 Union Ave., Foreman, 217 hours	108.50
T. O'Leary, 316 S. Aberdeen St., Laborer, 232 hours	104.40
Isabel Ward, 6548 Glenwood Ave., Telephone Operator	85.00
L. A. Jones, 3538 Vernon Ave., Relief Operator	125.00
J. T. Layton, 6511 S. Artesian Ave., Relief Operator	145.00
A. E. Wallace, 2317 N. Keeler Ave., Relief Operator	145.00
M. K. Badke, 2950 Keeley St., Vault and File Clerk	100.00
Max Ebler, 2226 Wabash Ave., Relief Operator, 35 days	142.74
J. Mildenberg, 3728 N. Spaulding Ave., Relief Operator	125.00
Edw. Flynn, 3523 Western Ave., Janitor and Messenger	100.00
W. Meyers, 3650 Vernon Ave., Laborer, 233 hours	104.85
Frank Roley, 2337 Elston Ave., Laborer, 201 hours	90.45
J. F. Vedder, 6834 Yale Ave., Load Desp	180.00
W. J. Kloss, 3220 Sacramento Ave., Load Desp	180.00
M. I. Coughlin, 434 E. 46th St., Load Desp	180.00
J. S. Black, 6155 S. Laflin St., Load Desp	180.00
Theo. Frantz, 5344 S. Winchester Ave., Boilerman	100.00
Patrick Connors, 10603 LaFayette Ave., Boilerman	100.00
J. Bielick, 3145 Parnell Ave., Laborer, 213 hours	95.85
T. Flaherty, 3303 So. Seeley Ave., Laborer, 240 hours	108.00
J. Walsh, 1302 Fuller St., Laborer, 244 hours	109.80
P. Nugent, 3634 Lowe Ave., Laborer, 224 hours	100.80

Underground Maintenance and Construction Division.

John A. Johnson, 6100 Ingleside Ave., Superintendent of Lines	225.00
J. Sharp, 2324 W. Madison St., Foreman	225.00
J. Lamping, 3016 Congress St., Foreman	190.00
C. C. Wilson, 3214 N. Whipple St., Foreman	190.00
J. J. Finneran, 501 W. Sibley St., W. Hammond, Ill., Foreman	190.00
I. L. Damrow, 6417 S. Campbell Ave., Lineman	165.00
C. O'Leary, 646 W. 47th Pl., Lineman	165.00
Edward Lee, 5343 Carpenter St., Lineman	165.00
W. F. Jones, 3306 Irving Ave., Lineman	165.00
Arthur Hull, 2220 S. Wabash Ave., Lineman	165.00
Fred Dushek, 3232 Wallace St., Lineman	165.00
Thos. Lane, 5740 S. Lincoln St., Groundman, 15 days	57.50
James Britton, 3039 Pitney Court, Lineman	165.00
S. Ward, 6548 Glenwood Ave, Groundman, 15 days	57.50
A. Jorgenson, 2153 Keystone Ave., Lineman	165.00
H. Inglebright, 1700 Park Ave., Lineman	165.00
Owen McLane, 6053 S. Halsted St., Lineman	165.00
J. R. Weston, 4709 Harrison St., Lineman	165.00
P. B. Simonton, 218 S. Western Ave., Temporary Foreman	190.00

Dennis Nolan, 448 Root St., Groundman	115.00
Thomas Woods, 1244 Washington Blvd., Groundman	115.00

Underground Maintenance and Construction Division.

W. O. Wilson, 4433 Monroe St., Superintendent	200.00
A. M. Anderson, 2843 Lyndale Ave., Cable Splicer, 193 hours	168.88
E. Pearson, 1020 Roscoe St., Cable Splicer, 148 hours	129.50
J. J. Elliott, 1364 E. 61st St., Cable Splicer, 205 hours	179.38
H. J. Berninger, 414 S. Lincoln St., Cable Splicer Helper, 192 hours	120.00
W. Brunsworth, 2921 W. 40th St., Cable Splicer Helper, 197 hours	123.13
J. E. Regan, 4740 N. Ashland Ave., Cable Splicer Helper, 192 hours	120.00
A. J. Peck, 5010 Calumet Ave., Cable Splicer, 180 hours	157.50
Harry Johnson, 2845 Lyndale Ave., Cable Splicer Helper, 193 hours	120.63

Inside Maintenance and Construction Division.

Jos. Miller, 6525 S. Marshfield Ave., Foreman	190.00
Henry Haag, 2633 Monroe St., Repairman	155.00
R. J. Kehoe, 4031 Grenshaw Ave., Repairman	155.00
Paul Matt, 5108 N. Leavitt St., Repairman	155.00
John Weber, 2537 Calvin St., Asst. Repairman	130.00
Thos. McDonough, 3758 Lowe Ave., Asst. Repairman	130.00
Edw. Schneider, 4735 W. Huron St., Asst. Repairman	130.00
Thos. Sheahan, 2476 N. Albany Ave., Repairman	155.00
E. F. Hoffman, 6048 Prairie Ave., Repairman	155.00
R. T. Kelly, 2912 Lowe Ave., Asst. Repairman	130.00
H. C. Peterson, 4448 Monticello Ave., Asst. Repairman	130.00

Power House.

J. T. Hawley, 220 Iowa Ave., Joliet, Superintendent	250.00
R. G. Close, 513 E. 11th St., Lockport, Operator	190.00
P. B. Brown, 415 Collins St., Joliet, Ill., Operator, 21 days	125.00
B. F. Konapack, 804 2nd Ave., Joliet, Operator	180.00
E. Bewersdorf, 1127 Madison St., Lockport, Asst. Operator	180.00
Geo. Simmons, Lockport, Ill., Asst. Operator	145.00
S. Merritt, 1225 Hamilton St., Lockport, Asst. Operator	180.00
N. Glandell, 203 Baker Ave., Joliet, Dynamo Tender	125.00
Frank Westerberg, 103 Iowa Ave., Joliet, Machinist, 197 hours	167.45
J. O'Bern, 9th and State Sts., Lockport, Dynamo Tender	125.00
R. Hartney, 314 Meeker St., Joliet, Dynamo Tender	125.00
R. Davidson, 109 Catalpa St., Joliet, Asst. Operator	145.00
T. Gunderson, 57 Park Ave., Joliet, Asst. Operator	145.00
Thomas O'Hara, 525 Morgan St., Joliet, Oiler	125.00
Wm. Fanning, 205 Miles Ave., Joliet, Oiler	125.00
Robert Curry, 110 Catalpa St., Joliet, Oiler	125.00
J. Povalish, Lockport, Ill., Asst. Operator	145.00
A. Suffern, 324 Hunter Ave., Joliet, Asst. Machinist, 197 hours	167.45
A. Leidig, 114 John St., Joliet, Ill., Maintenance Man	155.00
M. C. Rich, Lockport, Ill., Maintenance Man	155.00
R. E. Lundstrum, 1323 State St., Lockport, Clerk	125.00
J. H. Hurst, 500 S. Ottawa St., Dynamo Tender	125.00
Wm. Ward, 936 Washington St., Lockport, Ill., Oiler	125.00

Emergency Men.

J. Rodighiero, Lockport, Ill., Utility, 248 hours	173.60
G. Johnson, Lockport, Ill., Laborer, 147 hours	123.50
P. Roach, Lockport, Ill., Laborer, 207 hours	103.50
H. Vanduesen, 564 E. 11th St., Lockport, Ill., Laborer, 90 hours	45.00
J. Boza, Lemont, Ill., Laborer, 258 hours	129.00
M. Powalish, Lemont, Ill., Laborer, 258 hours	129.00
C. Barr, Lockport, Ill., Laborer, 258 hours	129.00
R. Leidig, Lockport, Ill., Laborer, 234 hours	117.00
D. Faletti, Joliet, Ill., Laborer, 219 hours	109.50
A. Rodighiero, Lockport, Ill., Laborer, 204 hours	102.00

P. Lyons, E. 17th St., Lockport, Ill., Laborer, 50 hours	25.00
Alf. Johnson, 18th and Jefferson, Lockport, Ill., Laborer, 221 hours	110.50
Chas. Carlson, 12th St., Lockport, Ill., Laborer, 95 hours	47.50
H. Murray, 9th St. and Hamilton Ave., Helper, 10 hours	6.00

Terminal.

Edw. Held, 3429 Parker Ave., Switchboard Operator	155.00
George Tuttle, 222 N. Hamlin Ave., Switchboard Operator	155.00
C. J. Quinlan, 2089 Ogden Ave., Floor Operator	145.00
J. E. Curtin, 1513 S. 56th Court, Cicero, Floor Operator	145.00
T. J. Considine, 4727 Monroe St., Operator, 17 days	87.83
P. J. Hanratty, 5311 S. Winchester Ave., Floor Operator	145.00
Henry Hilton, 5440 Winchester Ave., Janitor	96.00
F. Newman, 3089 Lyman St., Janitor	96.00
C. H. Gehrke, 327 W. 61st St., Operator	155.00

Blue Island.

Wm. H. Greene, 639 York St., Blue Island, Operator	125.00
Wm. Klebler, 318 Chicago St., Blue Island, Operator	125.00
Chas. Weber, 230 Walnut St., Operator	125.00

Wilmette Pumping Station.

H. S. Hart, 2150 Sherman St., Evanston, Operator	125.00
S. J. Cannon, 1309 Emerson St., Locktender and Janitor	100.00
A. Underdown, 706 Main St., Evanston, Operator	125.00
R. W. Faupel, 1516 Elmwood Ave., Wilmette, Operator	125.00
Chas. Rudd, 1738 Darrow Ave., Evanston, Operator	125.00

City Hall.

Wm. Flight, 4918 W. Superior St., Chief Operator	180.00
Knute Anderson, 6324 Wentworth Ave., Operator	145.00
Frank C. Lambert, 5526 S. Lincoln St., Operator	145.00
Henry Lawson, 1627 Orrington Ave., Evanston, Operator	145.00

Ashland Avenue.

C. J. Ward, 3001 S. Canal St., Operator	125.00
Robt. Perry, 1244 Washington Blvd., Operator	125.00
H. E. Reilly, 4445 Wallace St., Operator	125.00

Leavitt Street.

J. L. Cotey, 4741 Lexington St., Operator	125.00
Frank Davidson, 932 Rush St., Operator	125.00
Chas. Devine, 1513 Greenwood St., Evanston, Operator	125.00

West Twelfth Street.

W. E. Nancarrow, 5106 Sunnyside Ave., Operator	125.00
P. J. English, 3416 S. Marshfield Ave., Operator	125.00
E. P. DeBarr, 825 George St., Operator	125.00

H. N. May.

V. Kolloch, 4439 Keokuk Ave., Operator	125.00
R. Hardell, 3142 N. Robey St., Engineer	155.00
P. Kacyerzewski, 2354 Elston Ave., Operator	125.00
S. H. Reed, 2142 N. Crawford Ave., Operator	125.00

Forest Park.

R. W. C. Newmann, 7416 Washington St., Operator	125.00
A. Stange, 504 Ferdinand St., Operator	125.00
M. Tyrell, 5948 So. Elizabeth St., Operator, 7 days	29.17
Thos. Podraza, 1363 W. Chicago Ave., Operator, 14 days	58.33

Berwyn Pumping Station.

Andrew Blomgren, 3016 Carroll Ave., Berwyn, Chief Operator	35.00
Chas. Thorslund, 3018 Baldwin Ave., Berwyn, Asst. Operator	25.00
R. Hockzema, 3026 Hiawatha Ave., Berwyn, Asst. Operator	25.00

Utility Equipment Division.

Wm. J. H. Schultz, 3440 Fulton St., Superintendent	175.00
B. H. Stuber, 3029 Union Ave., Machinist, 198½ hours	168.73
Charles F. Larson, 6718 St. Lawrence Ave., Machinist, 192 hours	163.20
Paul Bassi, 2429 W. Superior St., Washer	96.00
Florence Casey, 4405 Normal Ave., Washer	96.00
Sidney Smith, 1221 W. Rand St., Washer, 24 days	76.80
Geo. B. Kelly, 834 N. Springfield Ave., Captain Robert R.	150.00
Thomas J. Higgins, 302 N. Lockwood Ave., Pilot, Robert R.	150.00
George H. Gardner, 1932 Clifton Park Ave., Engineer, Robert R.	150.00
W. B. Kneeland, 2632 N. Maplewood Ave., Engineer, Thos. A.	125.00
J. E. Greenwald, 4818 Wabansia Ave., Chauffeur	125.00
John Dean, 607 Belden Ave., Chauffeur	125.00
J. Neckerman, 4411 Federal St., Chauffeur	125.00
John Creen, 3002 Emerald Ave., Chauffeur	125.00
Peter Naughton, 4205 Normal Ave., Deck Hand, Robert R.	115.00
Henry Smith, 3444 S. Hoyne Ave., Chauffeur	125.00
Sidney McWhirter, 2020 Augusta St., Chauffeur	125.00
J. McCummisky, 5630 S. Carpenter St., Chauffeur	125.00

Temporary Overhead Maintenance and Construction Division.

H. W. Newman, 485 Monroe St., Foreman	190.00
Wm. G. Zepp, 7836 S. Carpenter St., Lineman	165.00
A. R. Ver Schare, 7836 S. Carpenter St., Lineman	165.00
Frank Hobbs, 2249 Bissell St., Lineman	165.00
Frank Guibard, 5731 Aberdeen St., Lineman	165.00
W. O. Kline, 5021 Irving Park Blvd., Lineman	165.00
John J. Dassie, 3616 W. 83rd St., Lineman	165.00
D. McAvoy, 3317 W. Madison St., Lineman	165.00
Chas. Kaiser, 3820 Ogden Ave., Lineman	165.00
Thos. Lane, 5740 So. Lincoln St., Groundman, 15 days	57.50
S. Ward, 6548, Glenwood Ave., Groundman, 2 days	7.67
W. Glass, 3738 Madison St., Lineman	165.00
Michael Hogan, 1507 W. 72nd St., Groundman	115.00
F. S. Allen, 4026 Washington Blvd., Lineman	165.00
Thos. J. Falls, 5561 Shields Ave., Lineman	165.00
James I. Barry, 218 S. Western Ave., Lineman	165.00
G. Swearinger, 2328 Monroe St., Lineman	165.00
T. A. Singer, 3718 Grand Ave., Lineman	165.00
Peter Hart, 348 W. 30th St., Groundman, 22 days	74.27
P. L. Englert, 3038 Wallace St., Groundman	115.00
Total	$ 33,660.57
Grand Total	$ 87,759.74

ADJOURNMENT.

Mr. Healy moved that the Board adjourn.
The motion prevailed.

L. J. Kipp
Clerk.

628.09773
C43S

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

ADJOURNED MEETING

TUESDAY, AUGUST 12, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll being called there were:

Present—Messrs. Carr, Clark, Lawley and Nance—Four.

Absent—Messrs. Sergel, Healy, Littler, Mueller and Paullin—Five.

TEMPORARY CHAIRMAN.

President Sergel being absent, Mr. Carr moved that Mr. Clark act as Chairman of the meeting.

The motion prevailed and Mr. Clark took the chair.

The Chairman announced that the roll call disclosed that a quorum of the Board was not present.

Mr. Lawley moved that when the Board adjourn, it adjourn to meet on Thursday, August 14, 1919, at 2 o'clock P. M.

The motion prevailed.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

L. T. King.

Clerk.

628.09773

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

ADJOURNED MEETING.

THURSDAY, AUGUST 14, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

The roll being called there were:

Present—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Absent—Messrs. Sergel and Littler—Two.

Temporary Chairman.

President Sergel being absent, Trustee Lawley moved that Mr. Clark act as Chairman of the meeting.

The motion prevailed, and Mr. Clark took the Chair.

REPORTS OF OFFICERS.

The Clerk presented report of the Attorney as follows:

CHICAGO, August 12, 1919.

To the Honorable the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—On June 19th Trustee Paullin presented a communication from Hon. H. P. Pearsons, Mayor of the City of Evanston, stating that at the meeting of the City Council held on June 17th he was requested to ask a permit from the Sanitary District for the use of its land along the banks of the North Shore Channel from Emerson to Isabella streets, to be used as a municipal golf course for the people of Evanston. Motion was made and carried that the request be granted in such form as the Law Department deemed advisable. Since then the Attorney has had several conferences with the City Attorney of Evanston and other representatives of that municipality, as the result of which an agreement has been prepared in duplicate and executed by the Mayor and Clerk of the City of Evanston, same being herewith transmitted.

I respectfully suggest that the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be authorized and directed to execute said agreement in duplicate.

Respectfully submitted,
(Signed) C. ARCH WILLIAMS,
Attorney.

THIS INDENTURE WITNESSETH, That:

WHEREAS, THE SANITARY DISTRICT OF CHICAGO, a municipal corporation organized and existing under the laws of the State of Illinois (hereinafter referred to as the "Sanitary District") is the owner of a right of way adjacent to its North Shore Channel extending from the north line of Emerson street in the City of Evanston, Cook County, Illinois, to the north limits of said city, and the CITY OF EVANSTON, a municipal corporation organized and existing under the laws of the State of Illinois (hereinafter referred to as the "City") has requested said Sanitary District for the right to use that part of said right of way hereinafter described for the purpose of beautifying and improving the same and using said right of way for a municipal golf course, tennis courts, baseball fields and for other recreation purposes, and said Sanitary District is willing to grant such right on the terms and conditions hereinafter set forth,

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, said Sanitary District hereby gives and grants to said City the permission, right and authority to use, occupy and enjoy that part of its right of way on the east and west banks of said North Shore Channel between the north line of Emerson street in said City, for the period of time and for the uses and purposes herein set forth.

The grant herein contained is made upon the following terms and conditions, to-wit:

1. That said City is hereby given and granted the right to use, occupy and enjoy that part of the right of way of said North Shore Channel on the west bank of said channel lying between the north line of Emerson street and the north city limits of said City until this grant is revoked under the terms and conditions hereinafter set forth.

2. That said City is hereby given and granted the right to use, occupy and enjoy that part of the right of way of said North Shore Channel on the east bank of said channel lying between the north line of Emerson street and the north line of Central street in said City until this grant is revoked under the terms and conditions hereinafter set forth.

3. That said City is hereby given and granted the right to use, occupy and enjoy that part of the right of way of

said North Shore Channel on the east bank of said channel lying between the north line of Central street in said City and the north city limits of said City, beginning December 1, 1920, until this grant is revoked under the terms and conditions hereinafter set forth.

4. It is understood and agreed that the permission hereby granted to said City to use said right of way shall not be construed to be exclusive, but that said right of way shall be open to the free passage of all persons and vehicles over and across the same to the extent that now exists. Said right of way shall also be subject at all times to the use by said Sanitary District and its officers and employees for any of the corporate purposes of said Sanitary District and shall be subject to the police regulations of said Sanitary District.

5. Said City may at its sole cost and expense level off the surface of said right of way, fill all holes and abandoned ditches with material taken from the spoil banks, plant trees, shrubs and flowers at such places as may be acceptable to said Sanitary District, and, in general, may park and beautify said right of way and use the same for the purposes herein set forth and for such other purposes as may not be inconsistent with the use thereof by said Sanitary District.

6. Said City may at its sole cost and expense lay out and construct a municipal golf course, tennis courts, baseball fields and play grounds on said right of way at such places as may be approved by the Chief Engineer of said Sanitary District and place benches and seats upon said right of way, but shall not erect any buildings of a permanent character, nor any fences, sewers or drains upon said right of way.

7. Said City hereby agrees that it will not interfere with or damage in any way any drains or sewer outlets on said right of way and will not damage the sloping banks of said North Shore Channel, and will not use said banks as landing places for watercraft unless express permission so to do is granted by the Chief Engineer of said Sanitary District.

8. Said Sanitary District may revoke the permission, right and authority herein granted to use, occupy and enjoy said right of way of the North Shore Channel herein specified, either in whole or in part, by giving ninety (90) days' notice in writing to said City of its intention so to do, and in the event said grant is revoked, said City hereby agrees to surrender the immediate possession of said right of way to said Sanitary District.

9. Said City hereby agrees to keep and save harmless and indemnify said Sanitary District against any and all claims for damages, liabilities, judgments, costs and expenses which may in any wise directly or indirectly result from any work, installation, operation or maintenance of any kind or nature whatsoever on said right of way of said North Shore Channel.

10. Said City is hereby given and granted the right to enter into any agreement with any voluntary or any other association of its citizens for the purpose of using said right of way of said North Shore Channel, or any part thereof, for the purposes herein set forth, but such grant shall not relieve said City from performing all of the terms and conditions of this indenture, and of its obligation to keep and save harmless and indemnify said Sanitary District against all claims for damages as set forth in the preceding section of this grant.

11. Said City hereby accepts this grant subject to the rights of all tenants, lessees and licensees or other persons occupying any part of said right of way of said North Shore Channel whose occupancy is authorized by lease, agreement, license or permit of said Sanitary District.

In Witness Whereof, said The

SANITARY DISTRICT OF CHICAGO has caused these presents to be signed by the Chairman of its Committee on Finance and to be attested by its Clerk, and said CITY OF EVANSTON has caused these presents to be executed by its duly authorized officers this .... day of July, A. D. 1919.

THE SANITARY DISTRICT OF CHICAGO,
By.....
Chairman of its Committee on Finance.
Attest:
.....,
Clerk.

CITY OF EVANSTON.
By HARRY PEARSONS,
Mayor.
Attest:
.....,
City Clerk.

Mr. Lawley moved that the Chairman of the Committee on Finance and the Clerk be authorized and directed to execute in duplicate said agreement.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

The Clerk presented his report of money received and deposited with the Treasurer during the month of July, 1919, which was ordered published and filed, as follows:

CHICAGO, August 12, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of three million eight hundred fourteen thousand two hundred twenty-three and thirty-eight hundredths ($3,814,223.38) dollars, during the month of July, 1919, from the following sources:

The Northern Trust Company, The Illinois Trust & Savings Bank, Wm. R. Compton Company and The Bankers Trust Company of New York, jointly, in payment for the following described City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919, sold them in accordance with their bid of July 14, 1919, accepted by the Board of Trustees on that date—		
500 4% bonds Nos. M4001 to M4500, inclusive, due January 1, 1930	$ 500,000.00	
500 4% bonds Nos. M4501 to M5000, inclusive, due January 1, 1931	500,000.00	
500 4% bonds Nos. M7001 to M7500, inclusive, due January 1, 1936	500,000.00	
500 4% bonds Nos. M7501 to M8000, inclusive, due January 1, 1937	500,000.00	
500 4% bonds Nos. M8001 to M8500, inclusive, due January 1, 1938	500,000.00	
500 4% bonds Nos. M8501 to M9000, inclusive, due January 1, 1939	500,000.00	
3,000 Bonds	$3,000,000.00	
		$2,837,155.00

The Northern Trust Company, The Illinois Trust & Savings Bank, Wm. R. Compton Company and The Bankers Trust Company of New York, jointly, in payment of accrued interest from July 1, 1919, to July 15, 1919, on above described bonds..... 5,000.10
Harry R. Gibbons, County Collector, account of 1918 taxes..... 750,000.00
Emil J. Wanek, Collector, Town of Calumet, account of 1918 taxes.. 11,678.93
Getz, Mitchell & Co., for sale of two steel deck plate girders..... 1,236.70
City of Chicago, being payment on account of judgments and accrued interest on same against the City of Chicago, balance of judgment with accrued interest having been paid with City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919..... 1,056.99
Atchison, Topeka & Santa Fe R. R. Company, in payment of semi-annual rental to December 31, 1919, of right-of-way and for pump house and pipe line at Corinth, Ill..... 1,050.00
George M. Reynolds, Treasurer, account of interest coupons attached to 41 unsold Sanitary District 4½% bonds of the District..... 922.50
Albert Stepps, for sale of horse and wagon..... 65.00
Law Department, for deposit of payroll check No. 721 dated June 28, 1919, payable to J. Walter Nielson, for the reason that this party is on a leave of absence and his name should not have appeared on the payrolls 62.50
Engineering Department, for deposit of payroll check No. 944 dated June 28, 1919, payable to James C. Kattenger, for the reason that this party did not report for duty..... 23.33
David Gordon, for sale of 37 old iron hoops from tanks at Stockyards Testing Station 10.00
Fitzpatrick Bros., for four months' rental of our water tap at the Old Stockyards Testing Station..... 1.26
International Harvester Company—
Being semi-annual rental from July 1, 1919, to January 1, 1920, for lots 1 and 3 on Main Channel.....$4,250.00
Semi-annual rental from July 1, 1919, to January 1, 1920, for part of lot 5 on Main Channel..... 250.00
4,500.00
The Texas Company, being semi-annual rental from April 1, 1919, to September 30, 1919, for 35.98 acres on the Chicago Drainage Canal 1,799.00
Corn Products Refining Company, being semi-annual rental for premises located on Main Channel at Argo..... 876.25
City of Chicago, being semi-annual rental for lot 19 on Main Channel from April 1, 1919, to September 30, 1919..... 600.00
Connolley Iron Sponge & Governor Company, being semi-annual rental to June 30, 1919, for lot 13 on Main Channel..... 542.50
Buchanan-Daley & Co.—
Being semi-annual rental from July 1, 1919, to December 31, 1919, for lots 1-4-5-6-7-8 under lease dated January 9, 1913.....$ 150.00
For lots 7, block 25 and 1 and 2 in block 57 and 1-2-3-4 in block 45..... 205.67
For lots 3 and 6, block 57..... 59.60
415.27

Chicago Transfer & Clearing Company, being rental for part of lot 141 along Main Channel for period July 1, 1919, to December 31, 1919 ..... 414.38

Mathew Henke, Anton Henke and John Henke, being semi-annual rental from July 1, 1919, to December 31, 1919, for lots 88-90-92-93-96-98-100-102-104-106-108-110 along Main Channel..... 125.00

Vincent Bueskiewicz, being annual rental from July 1, 1919, to June 30, 1920, for lots 214-217-218 along Main Channel..... 80.00

Van Fleet Shops, being rental for month of November, 1918, for premises located at No. 1 Jefferson street, Joliet, Ill..... 75.00

M. Cordano, being rental for the year 1919 for 4 acres hay and grazing land east of the Texas Oil Company at Lockport..... 20.00

J. A. Budlong, amount received for 90 yards of spoil from right-of-way of North Channel at Argyle and Lawrence Avenues..... 9.00

Sundry consumers, for electric power and light.....$ 51,298.66

City of Chicago—

For power and light for months of July, August, September, October and November, 1918, and January, February, March, April and May, 1919.....$129,274.22		
For interest and depreciation for months of January, February and March, 1919.....	685.83	
		129,960.05

County of Cook—

For power and light for months of February, March and April, 1919.....$	3,931.42	
For interest and depreciation for months of February, March and April, 1919.....	75.00	
		4,006.42

South Park Commissioners, for power and light for month of May, 1919..... 2,726.02

Commissioners of Lincoln Park—

For power and light for month of May, 1919 .....$	1,317.63	
For interest and depreciation for month of May, 1919	69.45	
		1,387.08

West Chicago Park Commissioners—

For power and light for month of May, 1919 .....$	1,153.95	
For interest and depreciation for month of May, 1919	112.14	
		1,266.09

Village of Forest Park, for power and light for months of January and February, 1919..... 899.39

Village of Dolton—

For power and light for month of May, 1919 .....$	537.60	
For interest and depreciation for month of May, 1919	18.65	
		556.25

State of Illinois, for power and light for months of April, May and June, 1919		611.55
Village of Maywood—		
For power and light for month of June, 1919	$ 518.37	
For interest and depreciation for month of June, 1919	44.65	
		563.02
War Camp Community Service, for power and light for months of January, April and May, 1919		520.60
Town of Cicero, for power and light for month of May, 1919		499.80
Village of Summit—		
For power and light for month of May, 1919	$ 350.58	
For interest and depreciation for month of May, 1919	32.98	
		383.56
Village of Melrose Park—		
For power and light on account	$ 236.19	
For interest and depreciation on account	59.46	
		295.65
Village of Lyons, for power and light for months of May and June, 1919		220.16
City of Blue Island—		
For power and light for months of May and June, 1919	$ 76.92	
For interest and depreciation for months of May and June, 1919	90.78	
		167.70
Village of Wilmette—		
For power and light for month of May, 1919	$ 137.97	
For interest and depreciation for month of May, 1919	10.00	
		147.97
Village of Bellwood—		
For power and light for month of May, 1919	$ 59.57	
For interest and depreciation for month of May, 1919	24.61	
		84.18
W. A. Jackson Company, for material delivered to them by our Storekeeper		470.47
Sundry power consumers, rental of meters for July, 1919		198.00
A. Abrahamson & Son, deposit for lowering wires at Patomac and Lawndale avenues		150.00
Texas Company, for return of empty barrels		30.00
City of Blue Island, charges incurred in replacing one 30-foot pole with a 45-foot pole at Broadway and B. & O. tracks		30.00

Eastern Metal Refining Company, for sale of scrap material	17.00	
J. Finneran, account personal telephone calls	2.60	
H. Dyer, installation of service	1.50	
Emily Martin, installation of service	1.50	
A. R. Derbyshire, installation of service	1.50	
W. Wathier, installation of service	1.50	
R. E. Brown, installation of service	1.50	
E. E. Worley, installation of service	1.50	
J. Young, installation of service	1.50	
Continental Oil Products Company, for sale of old transformer	1.35	
R. W. Faupel, account personal calls	.40	
J. T. Hawley, account personal telephone calls	.20	
		196,504.67
		$3,814,223.38

Yours very truly,

L. F. KING,
Clerk of the District.

CHICAGO, August 12, 1919.

$3,814,223.38.

Received from L. F. King, Clerk, the sum of three million eight hundred fourteen thousand two hundred twenty-three and thirty-eight hundredths ($3,814,223.38) dollars, on the dates and in the amounts as follows:

July 1		$ 11,761.91
July 2	$ 5,035.50	
July 2	130,076.39	
		135,111.89
July 3	$ 21.91	
July 3	922.50	
		944.41
July 7	$ 400,000.00	
July 7	4,385.78	
		404,385.78
July 8		368.85
July 9		2,037.88
July 10		3,291.75
July 11		65.00
July 12		4,270.73
July 14		2,914.77
July 15	$2,842,155.10	
July 15	3,678.36	
		2,845,833.46
July 16		4,507.09
July 17	$ 3,893.33	
July 17	350,000.00	
		353,893.33
July 18		8,085.86
July 19		9,030.85
July 21		9,332.15
July 22		3,461.93
July 23		944.42
July 24		8,104.65

July 25		1,257.09
July 26		290.06
July 28		582.66
July 29		132.66
July 31	$ 34.58	
July 31	3,579.62	
		3,614.20
Total		$3,814,223.38

to be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919	$2,837,155.00
County Collector	750,000.00
Electrical Department Working Capital	196,504.67
Collector, Town of Calumet	11,678.93
Land Revenue	9,456.40
Interest and Premium on City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919	5,000.10
Getz, Mitchell & Co.	1,236.70
City of Chicago Judgment Account	1,056.99
Water Service	1,050.00
Interest and Premium on Bonds	922.50
Police Department	65.00
Law Department	62.50
Calumet-Sag Channel Construction	23.33
Sanitary Improvement and Sewage and Special Investigation and Experiments Construction	10.00
Sanitary Improvements and Sewage and Special Investigation and Experiments, Maintenance and Operation	1.26
Total	$3,814,223.38

GEO. M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The Clerk presented the report of the Chief Engineer for the month of April, 1919, which was ordered published and filed, as follows:

CHICAGO, May 1, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of April, 1919, giving the detailed operations of the same.

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed 1073 cubic yards of material from the south spoil banks, from the 28th to the 30th. No material was removed from the 1st to the 28th.

Sloping of Banks.

The Great Lakes Dredge and Dock Company, Contractors, assignment of Byrne Brothers Dredging and Engineering Co. carried on no work on this contract during the month.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, Contractor, continued operations throughout the month. All work was carried on in one 10-hour shift per day. Drag line on the south berm, was engaged in excavating dam at Main Channel (M. C. Station 975 to 969) from the 1st to the 30th. Locomotive crane on the

north berm was engaged in filling overflow ditch between the Main Channel and the I. & M. Canal from the 7th to the 30th. Miscellaneous work was carried on as follows: Level off south berm from the 3rd to the 12th and 24th to the 30th; Clean up material yard from the 1st to the 30th; Excavating dam at station 42+00 from the 11th to the 22nd; Dismantle electric pumping plant from the 4th to the 30th; Digging outfall ditch station 67+40 from the 15th to the 30th; Backfilling from barge at station 28+00 on the 22nd; Removing trestle at station 23+00 from the 23rd to the 25th. Hoisting pump out of channel at station 20+50 on the 26th, 28th, and 29th. Grading Archer Road at the bridge on the 28th and 29th. Level off south berm at station 13+00 on the 30th. Digging outfall ditch at station 42+50, north side of channel, on the 30th, Patching C. & A. abutments on the 26th and 29th. The following force account work was carried on. Repairing Main Channel Wall at the I. & M. Canal overflow ditch from the 9th to the 12th, 15th, 17th and 18th. An average daily force of 41.6 men was employed. At the end of the month 98.8 per cent of the total estimated value of the contract was completed.

E. A. Hanrahan, contractor for connecting certain farm ditches with the Calumet-Sag Channel, removing two flumes and constructing about 800 yards of rip rap, and certain other minor work on sections 1 to 12 inclusive. Employed a small force in removing flume at station 69+50 from the 29th to the 30th. The work was 10 per cent completed at the end of the month.

Section 13.

A. Guthrie & Co., Inc., Contractors, continued operations throughout the month. Steam shovel No. 2, in channel, was engaged in excavating glacial drift in channel between stations 756+00 and 760+25 on the 18th, 19th, 23rd and 25th, and 28th to 30th. Two dinky engines and 3 dump cars engaged in hauling spoil from shovel No. 2 to backfill south wall between stations 768+00 and 770+00 on the 18th, 19th, 23rd to 25th, and 28th to 30th. Jack hammer drills were engaged in drilling old east retaining wall of the R. I. embankment preparatory to removing same from the 24th to the 30th. All the aforementioned work was carried on in one 10-hour shift per day. Pumping channel was carried on at station 757+50 from the 1st to the 30th, working an average of 4½ hours per day, and at station 782+00, from the 1st to the 19th, working an average of 5 hours per day. Traveler No. 1 was engaged in building forms for north wall between stations 760+25 and 759+75 from the 26th to the 30th, working one 10-hour shift per day. The following hand work was carried on: Cleaning off rock for footing north wall at station 760+50 from the 3rd to the 5th. Leveling backfill behind the south wall between stations 768+00 and 770+00 on the 18th, 19th, 23rd to the 25th and 28th to 30th working one 10-hour shift per day on hand work. An average daily force of 30.9 men was employed.

The City of Blue Island employed a force of 4 men placing pole and stringing wires for electric light, north of channel at Gregory Street foot path on the 22nd.

Section 14.

A. Guthrie & Co., Contractors, continued operations throughout the month. Steam shovel No. 5 on the north berm, engaged in excavating spoil from spoil bank, to be used for backfilling north walls, between stations 834+00 and 835+00 from the 1st to the 7th and stations 829+00 and 814+00 from the 15th to the 30th.

Three dinky engines and 16 dump cars were engaged in hauling spoil from shovel No. 5 to backfill behind north wall between stations 820+00 and 833+00 from the 1st to the 7th and 15th to the 22nd, hauling spoil to north approach of Ashland Avenue bridge from the 23rd to the 30th. Pumping channel was carried on at station 837+00 from the 1st to the 4th and 9th to the 21st, working one 5-hour shift per day. Three teams were engaged in leveling backfill behind walls with slips between stations 821+00 and 839 from the 1st to the 10th and 16th to the 22nd. Three teams were engaged in leveling backfill on Morgan Park Sewer on the 28th. Three teams leveling fill for north approach Ashland Avenue on the 29th and 30th. Hand work was carried on backfilling Morgan Park Sewer from the 27th to the 30th by a force of 4 men. All the above mentioned work was carried on in one 10-hour shift per day. An average daily force of 46 men was employed. At the end of the month 99.8 per cent of the total estimated value of the contract was completed.

BRIDGES.

Chicago Street Bridge.

A. Guthrie & Co. employed an average daily force of 12 men building forms for concrete for north and south abutments from the 1st to the 30th, working one 10-hour shift per day.

Division Street Bridge.

The Kelly Atkinson Construction Co. employed an average daily force of 6 men laying timber floor on this bridge from the 15th to the 28th and painting on the 29th and 30th, working one 8-hour shift per day. One team was employed hauling material on the 15th, 16th, 18th and 21st.

C. R. I. & P. Ry. (Main Line) Bridge.

A. Guthrie & Co. employed an average daily force of 12.5 men on the following work. Excavating for the north pier and East half abutment from the 1st to the 10th. Pouring concrete for cylinders Nos. 2 and 3 on the 11th and 12th, working one 7-hour shift per day and on the 15th, working one 5-hour shift; building forms for footings north abutment from the 16th to the 20th, working one 10-hour shift per day; Concreting footings on the 21st and 22nd, working one 8-hour shift per day. Removing forms on the 24th, working one 10-hour shift. Excavating for cylinder No. 2 on the 25th and 26th, working one 10-hour shift per day. Building forms for north abutment from the 28th to the 30th, working one 10-hour shift per day. Jack hammer drills were engaged in drilling old abutment for new bridge seat from the 1st to the 12th, drilling rock in cylinder No. 2 on the 18th and 19th, working one 10-hour shift per day. One dinky engine and 3 cars were engaged in hauling concrete to bridge cylinders on the 11th, 12th, 15th, 29th and 30th, various shifts; Hauling concrete for north abutment on the 21st, 22nd and 26th, working in 5 and 8 hour shifts. Concrete mixer on north berm at station 766+00 was engaged in mixing concrete for this bridge on the 11th, 12th, working one 7-hour shift per day; on the 15th, working one 8-hour shift; on the 26th, working one 5-hour shift and on the 29th and 30th, working one 3-hour shift per day.

The C. R. I. & P. Ry. Co. employed an average daily force of 5 men bracing temporary trestle bent from the 2nd to the 9th. Placing extra trestle bent on the 18th and 19th, working one 8-hour shift per day.

B. & O.-G. T. W. Railway Bridges.

A. Guthrie & Co., Contractors, continued operations throughout the month. Steam shovel No. 3 excavating rock from channel between stations 746+90 and 747+50 from the

1st to the 8th, syphoning water from West half, south abutment on the 9th. Two dinky engines and 4 dump cars were engaged in hauling spoil from shovel No. 3 to spoil area on the south berm between the B. & O. Ry. and Ann Street from the 1st to the 8th. Four Jackhammer drills were engaged in drilling holes in rock, in channel, between stations 747+00 and 746+90 on the 4th and 5th, drilled 38 holes with an average depth of 11 feet or 418 lineal feet of holes. Air compressor at station 748+00 was engaged in furnishing air for drills at the B. & O. and C. R. I. & P. Ry. Bridges from the 1st to the 12th, 18th, 19th and 24th to 30th. Concrete mixer on south berm, was engaged in mixing concrete for West half of the south abutment on the 9th, working an average of 3⅔-hours; on the 22nd and 23rd, working an average of 4½ hours. Pumping channel was carried on at station 749+00 from the 1st to the 30th. Hand work was carried on as follows: Grading spoil area, south berm between B. & O. Ry. and Ann Street from the 1st to the 8th. Removing concrete forms from West half of the north abutment on the 7th. Building forms for footings West half of south abutment from the 10th to the 23rd, building chutes and cable way for concreting footings on the 8th and 9th. All the above mentioned work was carried on in one 10-hour shift per day, except wherein noted.

Concreting the south abutment was completed on the 24th. This completes the substructure ready for the erection of the remainder of the superstructure. An average daily force of 22.1 men was employed.

The B. & O. Railway Co. employed an average daily force of 6 men on the following work: Raising tracks on the north and south approach trestle to B. & O. (C. C. Div.) Bridge from the 1st to the 3rd. Unloading carload of piles for S. D. of C. for use on the Public Service Spur track, on the 4th and 7th. Bracing trestle, north approach to B. & O. bridge on the 5th, 6th, 8th to 16th. Surfacing tracks between Stony Creek and channel on the 17th. All the aforementioned work was carried on in one 8-hour shift per day. Two watchmen were engaged in watching on the approaches to the B. & O. (C. C. Div.) bridge, working day and night shift of 12-hour each.

CONTROLLING WORKS.

A. Guthrie & Co., Contractors, employed one dinky engine in syphoning water from the west section gates from the 22nd to the 30th, working one-10-hour shift per day.

The Sanitary District Organization employed one man in painting the sector gate machinery houses on the 25th and 29th, working one 8-hour shift per day.

SEWERS.

Calumet Intercepting Sewer.

Contract Section No. 5.

Byrne Brothers Dredging and Engineering Company, Contractors, resumed operations on this section on the 25th and continued through the balance of the month. The work consisted of preliminary work such as laying construction tracks, etc. An average daily force of 4.5 men and 2.5 teams was employed from the 25th to the 30th.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Company, Contractors, continued operations throughout the month. The work consisted of backfilling, grading of streets, building catch basins, etc., placing of backfill on the property of the Chicago Gun Club was begun on the 24th and continued through the month. An average daily force of 48 men and 2 teams was employed throughout the month.

Evanston Intercepting Sewer.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work consisting of construction of manholes and sewer connections, etc. An average daily force of 18 men and 2 teams was employed. At the end of the month 99.5 per cent of the work was completed.

Temporary Pumping Plant at Evanston.

Nash-Dowdle Company, Contractor, continued the work of pumping throughout the month. An average daily force of 3 men was employed.

Desplaines River Intercepting Sewer.

Nash Brothers, Contractors, continued operations throughout the month. The work consisted of constructing the main line sewer, in tunnel, in First Avenue near Madison Street and the Madison Street line, in tunnel. An average daily force of 63 men was employed throughout the month. The work was 22.3 per cent completed at the end of the month.

PUMPING STATIONS.

Calumet Sewage Pumping Station.

T. J. Forschner Contracting Company, Contractors, continued operations throughout the month. The work consisting of building forms, placing concrete and reinforcing steel in the substructure of the stations. The placing of electrical conduits in the station was begun on the 24th and continued throughout the month. An average daily force of 68 men was employed. The work was 18.5 per cent completed at the end of the month.

Evanston Sewage Pumping Station.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work consisted of excavating and placing of concrete in the substructure of the station. The work on the manufacturing of the pumps, electrical equipment, valves and piping was carried on in the shops. An average daily force of 28 men was employed throughout the month. The work was 22.1 per cent completed at the end of the month.

Sewage Treatment Plant on the North Branch of the Chicago River.

The Sanitary District Organization employed a force of 3 men on the work of installing weirs in the sewer outlets at Montrose Avenue, Irving Park Boulevard, Clybourn Avenue, Chicago Avenue and Kinzie Street, throughout the month.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Bridges.

The Main Channel repair force was occupied during the month doing work at the controlling works Willow Springs and Summit Road Bridges.

CONTROLLING WORKS.

The Bear Trap Dam was closed the entire month.

MAIN CHANNEL EXTENSION.

BRIDGES.

Ninth and Sixteenth Street Bridges.

Minor repairs were made to the 9th Street bridge over Deep Run by the Main Channel repair force.

Two men were on duty on these bridges, working shifts from 7 A. M. to 3 P. M. and 3 P. M. to 11 P. M.

Butterfly Dam.

This dam was operated on the 6th, 13th, 20th and 27th to ascertain the condition of the same.

Dam at the Power House.

These dams were operated as follows:

The Forty-Eight Foot Dam was operated some part of eight days or a total of twenty-six hours and fifty-five minutes, an average of fifty-four minutes for each day of the month. The Twelve-Foot Dam was closed the entire month.

Samples of canal water were taken

every 8 hours for the Sanitary Division. Three men were on duty working shifts of 8 hours each throughout the month.

I. & M. Canal Lock at the Power House.

One boat passed through the lock during the month. The lights were repaired on the 3rd. The heater was repaired on the 12th and the 14th. The valve shafting was repaired on the 29th and 30th. No one was on duty on the lock during the month, the lock being operated by the dam tender.

Desplaines River Diversion.

The Sanitary District Organization employed a force of 5 men repairing a small leak in the leves on the northwest side of the river, near Summit, from the 2nd to the 8th.

North Shore Channel.

The Sanitary District Organization employed a force of 6 men on the work of repairs to outfalls and ditches along this channel. The work carried on during the month was as follows: Riprapping the west slope at Peterson Avenue from the 9th to the 11th, cleaning ditches around Lincoln Avenue from the 12th to the 21st, and around Touhy Avenue from the 22nd to the 31st.

BRIDGES.

Kenilworth (Touhy) Avenue Bridge.

The work of reflooring and painting this bridge was begun on the 8th. A force of 13 men was employed in removing the floor and sub plank preparatory to putting in a new floor, from the 15th to the 30th, the same force trimmed the slopes of the channel adjacent to the bridges. At the end of the month about half of the subplank for the new floor had been placed.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated, pumping teen minutes for each day of the sewage, and fresh water, throughout the month. The pumps were operated as follows:

Sewer Pump No. 1 was operated some part of nine days or a total of seventy-two hours and fifty-five minutes. Pump No. 2 some part of five days or a total of thirty-four hours and forty-five minutes. Pump No. 3 some part of eleven days or a total of eighty-eight hours. Pump No. 4 some part of twenty-nine days or a total of six hundred and thirty-two hours and forty-five minutes. The four pumps were operated for a grand average of six hours and fifty minutes for each day of the month and pumped an average of six thousand eight hundred and eleven cubic feet of sewage for each minute of the month.

The Fresh Water Pumps Nos. 5 and 6 were operated some part of five days or a total of sixty-three hours and twenty minutes, an average of two hours and seven minutes for each day of the month, and pumped an average of six thousand and ninety-eight cubic feet of fresh water for each minute of the month.

Sewage Pump No. 2 which was shut down on March 15th on account of a burned-out thrust bearing was put back in service on the 19th. Miscellaneous repair work was carried on throughout the month.

Lawrence Avenue Pumping Station.

This station was operated, pumping sewage, throughout the month. The pumps were operated as follows:

Sewer Pump No. 1 was operated some part of eight days or a total of eighty-three hours and twenty-five minutes. Pump No. 2 some part of eighteen days or a total of two hundred and ninety-seven hours and thirty minutes. Pump No. 3 some part of twenty-one days or a total of three hundred and sixty-four hours. The three pumps were operated for a grand average of eight hours and six-month, and pumped an average of

five thousand six hundred and ninety-one cubic feet of sewage for each minute of the month.

The fresh water pump was operated some part of two days or a total of twenty-two hours and thirty minutes, an average of forty-five minutes for each day of the month and pumped an average of six hundred and fifty-three cubic feet of water for each minute of the month.

Repairs to the coal conveyor which broke down on March 24th were completed and the same put back in service on the 3rd. An auxiliary pump for water service around the station was installed in the engine room on the 11th.

Wilmette Pumping Station.

The station was operated, pumping fresh water, throughout the month. The pumps were operated as follows:

Pump No. 1 was operated some part of thirty days or a total of six hundred and forty-five hours and thirty minutes. Pump No. 2 some part of four days or a total of fifty-nine hours and thirteen minutes. Pump No. 3 some part of thirty days or a total of five hundred and fifty-eight hours and thirteen minutes. Pump No. 4 some part of twenty-nine days or a total of four hundred and ninety-two hours and thirty-three minutes.

The four pumps were operated for a grand average of fourteen hours and fifty-four minutes for each day of the month, and pumped an average of twenty thousand eight hundred and thirty-nine cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATION.

Morton Grove Sedimentation Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary District.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois River at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on the samples sent from Lockport.

The laboratory force worked up data on analyses of Main Channel and Illinois River.

Sewer and Rain Gages.

Rain gages were operated at the 39th Street pumping Station, Stock Yards testing station, Lockport, Kensington, and at 31st Street and Western Avenue. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th Street and from the Main Channel at Lockport. Weekly samples from Lockport and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Drafting Division.

The following work was carried on during the month: Work was continued on the Calumet-Sag Atlas, Chicago River Atlas and Desplaines River Sewer Atlas. Revising index, indexing and filing maps. Designing filing cases for vault. Tabulating costs on Calumet-Sag Channel. Preparing exhibits for Zuedema case. Preparing bid sheets for trestle timber G. T. W. R. R. bridge over Calumet-Sag Channel. Preparing bid sheets for coal bids. Copying records at County Building. Checking Cook County Tax Exemption lists. Plat of soundings at Monroe Street bridge. Computing co-ordinates for North Branch Survey. Plotting hubs on index map. N. B. Survey. Indexing records at warehouses. Work on Byrnes Bros. extra claim for Section 9 Calumet-Sag Channel. Printing index cards. Setting type and printing titles on Calumet and Evanston Pumping Station Plans. Tracing plats for use in Roberts case. Preparing plats of N.

Shore Channel showing garden plots for Real Estate Department. Coloring deep waterway maps.

Bridge Division.

Work was continued on the detail drawings for reinforced concrete work of the Calumet Sewage Pumping Station. Considerable time was spent during the month checking and correcting the Contractor's detail drawings of the sluice gates for the Calumet-Sewage Pumping Station.

Detail drawings were made for the steel work of the floor of the laboratory and the roof of the wings of the Desplaines River Sewage Treatment Plant and the detail drawing for the steel work of the main building were partly checked.

Specifications were written for trestle timbers for the temporary diversion of the G. T. W. Ry. tracks at the crossing of the Calumet Channel.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Des Plaines River treatment works was continued.

Specifications were issued on Divisions A, C, N, O, P, R, V, covering the main plant and substructure, steel work, traveling crane, pumps, blowers, electrical equipment, sluice gates and venturi meters.

The preparation of supplementary plans for the Calumet and Evanston pumping stations was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the re-arrangement of the 95th Street pumping station.

Preparation of plans of the storm water overflow to the Calumet River was continued. Studies were continued on an auxiliary generator station at the Calumet Pumping Station to be run by oil engines.

Conferences were held with various parties from the Calumet Region in Indiana over proposed schemes for sewage diversion and treatment. Specifications were issued for Morton Grove Sedimentation Plant.

The Designing Mechanical Engineer visited the shops of the contractors in the East. A report was prepared on the southern trip. Visitors from various cities in Japan and students from the University of Illinois were shown around.

Hydraulic Measurement Division.

The self-recording gages at the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records from the gages were worked up in the office.

Field Parties.

Party was employed as follows: Soundings at Sag on the Main Channel account of New Channel. Desplaines River High Water. Setting gages on North Shore Channel. Seting concrete monuments Main Channel section "O"; Sewer department account weir construction. Survey North Branch. Farm land survey at Sag and Argo and 56th Ave. Main Channel for Real Estate Department. Cross sections of ditch over sewer on account of flood from I. & M. Canal.

The Calumet-Sag field parties performed the usual routine construction duties as follows: The Sag Division on Section 1; the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit construction costs of the Evanston and Calumet

sewers and of the Calumet-Sag Channel sections. Keeping the accounts of the department, preparing vouchers, furnishing information for other departments, and performing other necessary duties, etc.

Respectfully submitted,
G. M. WISNER,
Chief Engineer.

REPORTS OF COMMITTEES.

Engineering.

Mr. Lawley presented the following report from the Committee on Engineering:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting held August 7, 1919 (page 925 of the Proceedings), bids for widening of the South Branch of the Chicago River just South of Van Buren street and also just North of Sixteenth street under division "b" of the specifications, reports that it has considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer and finds that the lowest responsible bidder is the Great Lakes Dredge & Dock Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for widening the South Branch of the Chicago River just South of Van Buren street and also just North of Sixteenth street be, and the same is hereby, awarded to the Great Lakes Dredge & Dock Company for the unit prices named in its bid which aggregate the sum of $68,980.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Great Lakes Dredge & Dock Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Engineering:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering, to which were referred at the meeting held August 7, 1919 (page —of the Proceedings), bids for wrecking and removing the Westerly portion of the power house of the North Western Elevated Railroad Company and adjoining tunnel, under division "A" of the specifications, having con-

sidered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, finds that the lowest responsible bidder is the W. J. Newman Wrecking Company of Chicago, Illinois.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for wrecking and removing the Westerly portion of the North Western Elevated Railroad Company and adjoining tunnel under division "A" of the specifications be, and the same is hereby, awarded to the said W. J. Newman Wrecking Company for the lump sum price named in its bid of $17,500.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by the said W. J. Newman Wrecking Company and a bond for the faithful performance of said contract has been approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT. A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the W. J. Newman Wrecking Company with the Southern Surety Company thereon as surety for the faithful performance of its contract for wrecking and removing a portion of the power house and adjoining tunnel on the south branch of the Chicago River just south of Van Buren street for the Sanitary District and therefore recommends the passage of the following order:

Ordered, That the bond of the W. J. Newman Wrecking Company for the faithful performance of the above specified contract, said bond being in the penal sum of $25,000.00, be, and the same is hereby, approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

The resolution contained in the enclosed extracts with reference to the bond of the W. J. Newman Wrecking Compnny:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR WRECKING AND REMOVING THE WESTERLY PORTION OF THE POWER HOUSE OF THE NORTH WESTERN ELEVATED RAILROAD COMPANY AND ADJOINING TUNNEL JUST SOUTH OF VAN BUREN STREET.

THIS AGREEMENT, Made and entered into this 12th day of August A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the W. J. Newman Wrecking Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as herein provided to the Contractor by the said Sanitary District, and under the penalty expressed in the bond bearing even date herewith, hereto attached, at his proper cost and expense to do all the work and furnish all the materials, tools, labor and all plant, appliances and appurtenances called for bv this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for wrecking and removing the westerly portion of the power house of the Northwestern Elevated Railroad Company and adjoining tunnel just south of Van Buren street in the City of Chicago, County of Cook, State of Illinois. The work done and materials furnished shall be strictly pursuant to and in conformity with these specifications and the contract drawings, attached hereto, and made a part of this agreement. It is further covenanted and agreed that the work shall be executed under the direction and superyision of the Chief Engineer of the Sanitary District and his properly authorized assistants, by whose measurements and calculations the quantity and amount (including extras) of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Sanitary District shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation it is further agreed by and between said Sanitary District and said Contractor, that the Chief Engineer of the Sanitary District shall determine all questions in relation to the performance of said work, and shall in all cases decide every question which may arise relative to the execution of the contract on the part of the said Contracor, and his estimate and decision shall be final and conclusive, and such estimate and decision in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this agreement.

Wherever the word "Engineer" is used herein, it shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other designated Engineer in charge of the work.

Wherever the words "the work" are used herein they shall be interpreted to mean the work, including all material, labor, tools and all appliances and appurtenances, necessary to peform and complete everything specified or implied in the contract or shown on the drawings in full compliance with all the terms and conditions hereof.

Whenever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

WRECKING AND REMOVING THE WESTERLY PORTION OF THE POWER HOUSE OF THE NORTHWESTERN ELEVATED RAILROAD COMPANY AND ADJOINING TUNNEL JUST SOUTH OF VAN BUREN STREET IN THE CITY OF CHICAGO.

SPECIFIC CONDITIONS.

1. *Location.*

The work is located on the easterly side of the south branch of the Chicago River between Van Buren Street and Harrison Street, in the City of Chicago, County of Cook and State of Illinois, as shown on the attached contract drawings.

2. *Description.*

The work to be done under Division "A" consists of the wrecking and removal of the material therein as specified of that portion of the westerly part of the power house recently acquired by The Sanitary District from the Northwestern Elevated Railroad Company above elevation plus (+6.0) Chicago City Datum (with the exception of the concrete engine foundations) as shown on the attached contract drawings. This westerly portion has been abandoned by the said Railroad Company and detached from the remainder of the building, the work to be done under Division "A" shall also include the wrecking and removal of that portion of the tunnel and shaft situated on property recently acquired from the Commonwealth Edison Company adjoining said portion of said power house, above elevation plus six (+6.0) Chicago City Datum, as shown on the said contract drawings.

3. *Wrecking and Removal of Power House, Tunnel and Shaft.*

The Northwestern Elevated Railroad Company has removed its machinery from the portion of the power house which is to be wrecked and removed under this contract, and has constructed a new concrete dock and a new building wall along the line of said new dock, The Commonwealth Edison Company has likewise removed its cables and other appliances from the tunnel and shaft situated just south of and adjoining the above mentioned portion of said power house. The Contractor for the work under Division "A" shall wreck and entirely remove from the site all that portion of said power house, tunnel and shaft, including all material therein, above elevation plus six (+6.0) Chicago City Datum (which is the elevation of the basement floor of said power house) with the exception of the concrete engine foundations. The removal of the concrete engine foundation is to be performed by the Contractor for the work under Division "B."

4. *Material Salvaged from Power Station, Tunnel and Shaft.*

Upon the payment to the Sanitary District by the Contractor of the sum hereinafter specified in Article 31 of the General Conditions, the material contained in the westerly portion of said power house above the elevation of plus six (+6.0) Chicago City Datum with the exception of the concrete engine foundations, also the material in the brick and concrete tunnel and shaft, above the elevation of plus six (+6.0) Chicago City Datum, shall be delivered to said Contractor, the title to the same to remain in the Sanitary District until removed from the site of the work. Plans have been furnished to the Sanitary District by the Northwestern Elevated Railroad Company which purport to show the detailed construction of the power house, the amount, dimensions and sizes of the various materials used in the construction thereof, and the changes and alterations recently made in said power house by said Railroad Company. These plans are on file in the office of the Chief Engineer of said Sanitary District for the inspection of bidders and Contractors, but the completeness and accuracy of the information indicated thereon is not guaranteed by the Sanitary District. The Contractor for the work under Division "A" must satisfy himself, before bidding and by such investigations as he may determine necessary, of the amount and value of such materials, and said Contractor hereby agrees to assume all risk of loss due to a variation between the quantity of material indicated on said plans and the actual amount of material obtained from said power house, and the said Contractor further agrees to assume all responsibility for loss or damage to said material due to careless or improper workmanship, theft, fire, explosion, acts of public authorities, or from any other cause occurring after the said structures have been delivered to said Contractor.

10. *Disposal of Material.*

It is understood that no material shall be dumped in the Chicago River, or in any place other than the designated dumping area, but if in the prosecution of the work under this contract, the Contractor accidentally deposits or otherwise places material in the Chicago River he shall remove such material immediately when ordered by the Engineer, and shall dispose of same in the manner hereinbefore specified for disposal of material, free of charge to the Sanitary District.

12. *Plant.*

The Contractor shall furnish all material, labor and plant required for performing all work hereinbefore specified or collateral thereto. The cost of furnishing all material, labor and plant required, including the cost of moving said plant to any and all parts of the work, and making such changes in wires, poles, etc., as may be necessary shall be included in the unit prices hereinafter specified.

13. *Precautions.*

The Contractor shall take all precautions necessary to protect all vessels or water craft navigating the Chicago River, from any and all obstructions to navigation arising or growing out of the work covered by this contract. He shall display such lights and other danger signals as may be necessary for guiding and warning vessels, and shall furnish watchmen, fences, red lights and other guards that are necessary for the protection of persons and property, and shall be liable for all losses due to delays and damages sustained by vessels or other craft navigating the channel that may be due to or result from the work under this contract. The cost of furnishing all labor and protections as above specified shall be covered by the unit price herein specified for dredging and no claim for damages or extra work on account of such labor and protections will be allowed.

14. *Misplaced Material.*

Should the Contractor, during the progress of the work, lose, dump, throw overboard, sink or misplace any material, plant or machinery which, in the opinion of the Engineer, may be dangerous to or obstruct navigation, he shall recover and remove the same with the utmost dispatch. The Contractor shall give immediate notice, of the description and location of said obstructions, to the Engineer, and when required shall mark or buoy such obstructions until the same are removed. Should he refuse, neglect or delay compliance with the above requirement, such obstructions may be removed by the Sanitary District and the cost of such removal shall be paid by the Contractor or may be deducted by the Sanitary District from any money due or to become due the Contractor under this contract.

15. *Permits.*

The Contractor shall obtain all required licenses and permits and pay all charges and expenses connected therewith. He shall also conform to all municipal and Sanitary District ordinances and all regulations imposed by the United States Government in any manner affecting this work.

16. *Occupation by Sanitary District.*

The Sanitary District hereby reserves the right at any time either by its own employees or by any contractor, to enter upon, use and occupy for its corporate purposes any portion of the sites of the work hereunder or any portion of the right of way of the Sanitary District occupied by the Contractor in performing the work hereunder, provided such use and occupation shall not prevent the work herein specified from being performed by the Contractor.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled ('An Act to Create Sanitary Districts and to Remove Obstructions from the Des Plaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, and all acts amendatory thereof and supplementary thereto.

City Ordinances.

Art. 2. The said Contractor also agrees to carry on all work provided for in this contract in strict conformity with all ordinances of the City of Chicago and all Acts of Congress which in any way affect the performance of the work hereunder.

Omissions on Contract Drawings.

Art. 3. The Contract Drawings furnished form a part of these specifica-

tions, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or contract drawings.

Examination of Site.

Art 4. All bidders for work under this contract are required, before submitting proposals to examine the sites of the work and adjacent premises, the various means of approach to the sites and the plans hereinbefore mentioned as being on file in the office of the Chief Engineer, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract also as to the facilities for delivering and for handling material and plant at the site, and for disposing of material to be removed from the site, and the conditions and difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist, or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make the necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time for the performance of the work.

Changes in Contract Drawings.

Art. 6. The Sanitary District reserves the right to make any changes in the specifications and Contract Drawings which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby. If such alterations increase the quantity of the work to be done, such increase shall be paid for according to the quantity of work actually done at the unit prices specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

Extra Work.

Art. 7. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified. the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause

whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 8. In estimating the cost of extra work, the cost of material shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amounts paid for same as shown by the payrolls of the Contractor, with cost of indemnity insurance added, when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, if requested by the Chief Engineer, verify by his affidavit the correctness of the amounts paid for materials, and labor. It is further agreed that in all cases of question or dispute arising or growing out of this contract in anyway regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of delay or of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision.

Art. 9. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents. The Contractor shall be guided by the lines, stakes, marks and grades given by them, and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Materials, Workmanship and Inspection.

Art. 10. All materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all work which, during the progress and before its final acceptance may become damaged from any cause, shall be removed and replaced by good and satisfactory work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work and to all points where material to be used in the work is manufactured, procured, stored or dumped and shall be allowed to examine any material furnished for use in the work under this contract.

All inspection of any and all material furnished for use in the work to be performed under this contract shall be made at the site of the work after the delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay the Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the extra time expended in performing any such inspection at said other points.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificate, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art 12. All books and accounts kept by the Contractor in connection with this contract shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, the cost of repairs to machinery, and other information required by the Engineer. The Contractor shall, on request, furnish the Engineer with copies of expense bills for transportation charges on all machinery, material and supplies shipped to or from the work under this contract.

Plant.

Art. 13. The Contractor shall furnish all material and supplies, plant, tools and implements, in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer all barricades and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the rates and prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 14. Whenever the Contractor shall be permitted or directed to perform work at night or on Sundays or holidays, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer and no extra compensation shall be allowed therefor.

Clearing Site.

Art. 15. The Contractor further agrees to remove all materials, implements, barricades, falsework, debris, and rubbish connected with or caused by said work immediately upon completion of the same and to leave the site of the work in perfect condition insofar as affected by the work under this contract.

Precautions.

Art. 16. The Contractor shall take whatever precaution may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident, from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 18 In accordance with the Rules and Regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employees such regulations in regard to cleanliness, and the disposal of garbage and wastes, as shall conduce to their health and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall make provision for an ample supply of suitable drinking water, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the right of way or property of said Sanitary District, easement, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 19. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses that may in anywise come against said Sanitary District, or which may be the result of an infringement of any patent, by reason of the use of any materials, machinery, devices, apparatus or processes fur-

nished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 20. The Contractor shall take all necessary precautions for the protection of the building and dock of the Northwestern Elevated Railroad Company, adjoining and adjacent to the work to be performed under this contract. If any damage shall be done by the Contractor or by any person or persons in his employ to said building or dock of the Northwestern Elevated Railroad Company or to the owner or occupants of any land or to any real or personal property adjoining, or in the vicinity of the work herein contracted to be done, the Engineer shall have the right to estimate the amount of said damage, and to cause the Sanitary District to pay the same to said owner or occupant, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to keep and save harmless the Sanitary District from and to assume all liability for any and all damages to the building and dock of said Northwestern Elevated Railroad Company, and to the owners, occupants and lessees of same that may in any way be due to or result from the work performed under this contract. Said Contractor also covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself of his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District, for or on account of any such injuries or such damages received or sustained by any person or persons from said Contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employes, and the said Contractor further agrees that so much of the money due to him under and by virtue of this contract, as shall be considered necessary by The Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the Board of Trustees.

Employers' Liability Act.

Art. 21. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital service and the compensation provided for in the Act of the General Assembly of the State of Illinois entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10, 1911, in force May 1, 1912, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or deaths suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 22. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor will be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign, by power of attorney or otherwise, any portion of the moneys that may become due through the performance of this contract.

Liens.

Art. 23. If at any time during the progress of said work, the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make the payments hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons or corporation, for labor, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon or in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time.

Art. 24. The Contractor for the work under Division "A" agrees to pay the said Sanitary District the sum of No Dollars ($0.00) as compensation for the material specified in Article 31 of the contract and to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor, and to prosecute the same with all due diligence and to entirely complete the work under said Division "A" within sixty (60) calendar days from the date of approval of said bond.

It is understood and agreed that Time is of the essence of this contract and that a failure on the part of said Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss and damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 25. It is therefore covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work herein specified under Division "A" within the time specified in Article 24, even though he is allowed to complete any one or more of said items of work, then said Contractor shall and will pay the said Sanitary District the sum of Twenty-five Dollars ($25.00) for each and every day the Contractor shall be in default in the time of completion of said work under said Division "A."

Said sum of Twenty-five Dollars ($25.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which the said Sanitary District will suffer by reason of such default and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of said work, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto. It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for delays.

Extensions or Additions.

Art. 26. In the event that any material alterations or additions are made as herein specified, which, in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period or periods of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of

such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this paragraph shall not otherwise alter, change or invalidate the provisions of this contract, with reference to "Liquidated Damages" and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 27. The contractor shall delay or suspend the progress of the work or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided, that in event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay, or delays, suspension or suspensions.

Unavoidable Delay.

Art. 28. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by necessary or unavoidable act or delay of the Sanitary District or by riot, insurrection, war, pestilence, strikes, acts of public authorities, fire, lightning, earthquake, cyclone or through any default of other parties under contract with said Sanitary District, then the time herein fixed for the completion of such part hereof said work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowances shall be made unless a claim therefor in writing is presented to the Engineer within four (4) days after the commencement of such delay. And it is further expressly agreed that said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of any delays resulting from any of the causes above specified, except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. Said Engineer shall decide the number of days that said Contractor has been so delayed, and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 29. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character, and in the time herein specified; or if said Contractor shall fail financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by the said Contractor; or if the Contractor shall lose control of said work for any cause whatsoever, except by act of God or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer; or if in the opinion of the Engineer the Contractor refuses or neglects to use measures to protect the said materials, work and adjacent structures from damage; or if in the opinion of the Engineer the Contractor is guilty of carelessness or incompetency in the execution of said work; or in the opinion of the Engineer the said work has been or is being delayed by the Contractor; or if in the opinion of the Engineer the rate of progress is not such as to insure the completion of the work within the time specified, or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor is wilfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Santary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or any part thereof, that may be

designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid, by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in this section specified, the said Sanitary District shall have a lien upon all the materials, supplies, machinery, implements and tools of the Contractor for the purpose hereinafter specified; and the said Sanitary District may thereupon immediately take possession of all said materials, supplies, machinery, implements and tools, for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract, and in completing the said work by contract, said Sanitary District may use such materials, supplies, machinery, implements, tools and plant as may be the property of said Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other contractors if all or any part of said work is completed by contract, and any sum or sums of money paid by the Sanitary District for the cost of repairs and replacements upon machinery, implements, tools and plant of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance and as compensation for accidental injuries or death suffered by employes in the course of their employment in the performance of said work under the employers' liability act of the State of Illinois in force July 1, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the Sanitary District out of any moneys that may be due, or may at any time thereafter become due to said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid then the Sanitary District may sell all materials, supplies, machinery, implements, tools and plant then on hand, obtained from said Contractor, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of said property at such sale shall be credited to said Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and his bondsmen shall be liable to pay the amount of said deficiency, and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 30. The Contractor for the work under Division "A" shall furnish a bond for the faithful performance of such contract in the penal sum of twenty-five thousand dollars ($25,000.00). Said Contractor shall furnish bondsmen whose financial standing is satisfactory to the Board of Trustees of said Sanitary District, and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

Art. 31. The said Contractor for Division "A" agrees to accept the following price as full compensation for furnishing all the material, and for doing all the work contemplated and specified in this contract, also for all loss or damages arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstructions or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work, and for well and faithfully completing the work, and the whole thereof, in full compliance with the contract drawings and specifications, and the requirements of the Engineer under them, to-wit:

For wrecking and removing power house and tunnel, including the disposal

of the material and clearing the site, as specified, the sum of seventeen thousand five hundred dollars ($17,500.00).

And the said Sanitary District agrees to accept the following as full compensation for the material contained in the westerly portion of the power house recently acquired by the Sanitary District from the Northwestern Elevated Railroad Company, above the elevation of plus six (+6.0) Chicago City Datum, with the exception of the concrete engine foundations, also the material in the brick and concrete tunnel and shaft above the elevation of plus six (+6.0) Chicago City Datum situated on property adjoining said portion of said power house, the sum of No Dollars ($0.00).

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents, and patented material, appliances and processes used in the work described in the specifications. Before final payment is made, the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 32. The said Sanitary District agrees to pay said Contractor the sums herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 33. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials, except in the manner set forth in this contract, nor until all the stipulations, provisions, and conditions, hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate pay, and, it hereby binds itself to pay the said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the successors, heirs, and legal representatives of said Contractor.

In Witness Whereof, on the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President and to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.

By.....
.....(Seal)
.....(Seal)
.....(Seal)

Chairman of Its Committee on Finance.

Attest:

.....
Clerk.

Attest:

.....
Secretary.

Approved,....., 1919.

.....
Division Engineer.

.....
Chief Engineer.

.....
Assistant Attorney.

.....
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, the W. J. Newman Wrecking Company, a corporation organized under the laws of the State of Illinois, as principal, and as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of twenty-five thousand dollars ($25,000.-00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 12th day of August, A. D. 1919.

The Conditions of the Above Obligation is Such, That whereas the above bounden W. J. Newman Wrecking Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 12th day of August, A D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the wrecking and removing portion of power house and tunnel just south of Van Buren Street, in the City of Chicago, County of Cook, State of Illinois, as specified under Division "A" in the foregoing contract.

Now, if the said W. J. Newman Wrecking Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the drawings thereto attached and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses, and attorney's fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in anywise result from the carelessness or neglect of said W. J. Newman Wrecking Company, its agents, employes, or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to the said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for first aid, medical, surgical and hospital attendance and compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or deaths suffered in the course of employment, approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said W. J. Newman Wrecking Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person and shall repay any overpayment, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, And made a condition hereof, that any judgment, rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said W. J. Newman Wrecking Company, or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or deaths suffered by employes, in the course of their employment, when notice of the pendency of such suit, bearing or arbitration shall have been given said W. J. Newman Wrecking Company, shall be conclusive against each

and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

.....(Seal)
.....(Seal)
.....(Seal)
.....(Seal)

Approved as to form .....A. D. 1919:

....., *Assistant Attorney.*

....., *Attorney.*

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the Great Lakes Dredge & Dock Company with the Fidelity & Deposit Company of Maryland thereon as surety, for the faithful performance of its contract for widening the south branch of the Chicago River just south of Van Buren street and also just north of Sixteenth street, in the City of Chicago, for the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the Great Lakes Dredge & Dock Company for the faithful performance of the above specified contract, said bond being in the penal sum of $25,000.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the proceedings of the Board.

Respectfully submitted,

JAS. H. LAWLEY, *Chairman.*
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

The following is the contract and bond of the Great Lakes Dredge & Dock Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR WIDENING THE SOUTH BRANCH OF THE CHICAGO RIVER JUST SOUTH OF VAN BUREN STREET AND ALSO JUST NORTH OF SIXTEENTH STREET.

THIS AGREEMENT, Made and entered into this 12th day of August, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Great Lakes Dredge and Dock Company, a corporation organized under the laws of the State of New Jersey, party of the second part, hereinafter designated the Contractor.

WITNESSETH, That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as herein provided to the Contractor by the said Sanitary District, and under the penalty expressed in the bond bearing even date herewith, hereto attached, at his proper cost and expense to do all the work and furnish all the materials, tools, labor and all plant, appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for widening the south branch of the Chicago River just south of Van Buren Street and also just north of Sixteenth Street, in the City of Chicago, County of Cook, State of Illinois.

The work done and materials fur-

nished shall be strictly pursuant to and in conformity with these specifications and the contract drawings, attached hereto, and made a part of this agreement. It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of the Sanitary District and his properly authorized assistants, by whose measurements and calculations the quantity and amount (including extras) of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Sanitary District shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation it is further agreed by and between said Sanitary District and said Contractor, that the Chief Engineer of the Sanitary District shall determine all questions in relation to the performance of said work, and shall in all cases decide every question which may arise relative to the execution of the contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive, and such estimate and decision in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this agreement.

Wherever the word "Engineer" is used herein, it shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other designated engineer in charge of the work.

Wherever the words "the work" are used herein they shall be interpreted to mean the work, including all material, labor, tools and all appliances and appurtenances, necessary to perform and complete everything specified or implied in the contract or shown on the drawings in full compliance with all the terms and conditions hereof.

Whenever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

WIDENING THE SOUTH BRANCH OF THE CHICAGO RIVER JUST SOUTH OF VAN BUREN STREET AND JUST NORTH OF SIXTEENTH STREET IN THE CITY OF CHICAGO.

SPECIFIC CONDITIONS.

1. *Location.*

The work is located at two places: on the easterly side of the south branch of the Chicago River between Van Buren Street and Harrison Street; and on the easterly side of said south branch of the Chicago River extending north from Sixteenth Street for a distance of about seven hundred and fifty (750) feet; both in the City of Chicago, County of Cook and State of Illinois, as shown on the attached contract drawings.

2. *Description.*

The work to be done under Division "B" consists of the wrecking and removal of the concrete engine foundations in the abandoned portion of said power house recently acquired by The Sanitary District from the Northwestern Elevated Railroad Company; the wrecking and removal of the walls, foundations and grillage of said portion of said power house below elevation plus six (+6.0) Chicago City Datum; and the wrecking and removal of the old concrete dock; also the wrecking and removal of that portion of the tunnel and shaft situated on property recently acquired from the Commonwealth Edison Company adjoining said portion of said power house below elevation plus six (+6.0) Chicago City Datum. All of said structures are to be removed down to the established grade for the bottom of the improved river, also the pulling down of all foundation and detached piles; also the excavation by dredging of the material in both of the pieces of real estate on which said structures are located above the established grade between the center line of the river and the new dock line as estimated by the Sanitary District; also the removal of the old existing dock extending northerly from Sixteenth Street along the easterly side of said river for a distance of about seven hundred and fifty (750) feet; and the pulling of all detached and foundation piles at said location, the excavation by dredging of the material in the piece of real estate at the site of said work above the established grade between the center line of said river and

the new dock line and all other work necessary to entirely complete the widening of the river at both sides; all as herein specified and as shown on the attached contract drawings.

5. *Removal of Old Concrete Dock, Walls and Foundations.*

The Contractor for the work under Division "B" shall begin work immediately after the completion of work under Division "A" and upon receipt of written notice from the Chief Engineer. Included under this division is the removal of the old existing concrete dock wall; the removal of all other walls, grillage, and foundations below elevation plus six (+6.0) Chicago City Datum, the removal of the entire concrete engine foundations in the portion of the power house, otherwise wrecked by the Contractor for the work under Division "A" and the wrecking and removal of that portion of the brick and concrete tunnel and shaft below elevation plus six (+6.0) Chicago City Datum. Plans are on file in the office of the Chief Engineer which purport to indicate the details of construction of the said dock, walls, grillage, and foundations, but the completeness and accuracy of these plans is not guaranteed by the Sanitary District.

Payment for the above mentioned work of removing old concrete dock, walls, grillage, tunnel and shaft, and foundations shall be made by the Sanitary District to the Contractor at the unit price per cubic yard hereinafter specified, to be paid for dredging. Any salvage which may result from the above mentioned work shall become the property of the said Contractor.

6. *Removal of Old Timber Dock.*

An old timber and pile dock, anchored to anchor piles set back in the original ground, extends from the south to the north limit of the work to be performed near Sixteenth Street. This dock is in bad condition, and is not continuous, having disappeared entirely in several places. The Contractor for the work under Division "B" shall remove the timbers and anchor rods, pull the piles, and perform all other work necessary to entirely remove the dock from the site of the work. Any salvage which may result from the removal of said dock shall become the property of the Contractor. In the event that the owners of the adjacent property refuse the Contractor permission to go upon their property to remove such anchor piles and rods as may be situated thereon, the Contractor hereunder shall cut such anchor rods at the new dock line as established by the Sanitary District. Payment for the actual number of lineal feet of old dock removed will be made by the Sanitary District to the Contractor at the unit price hereinafter specified to be paid for removal of old dock.

7. *Pulling and Removing Piles.*

The Contractor for the work under Division "B" shall pull and entirely remove from both of said sites all foundation and detached piles located within the limits to be dredged under this contract. Payment for this work shall be made by the Sanitary District to the Contractor at the unit price hereinafter specified to be paid for pulling and removing piles, except that no payment shall be made under this item for the work of pulling and removing piles which are part of the existing timber dock near Sixteenth Street and for which payment is to be made under the lineal foot price, hereinafter specified to be paid for removing old timber dock. Any salvage which may result from the above mentioned work shall become the property of the Contractor.

8. *Excavation by Dredging.*

The Contractor for the work under Division "B" shall excavate by dredging and dispose of all remaining material lying between the easterly limits of work under this contract and the center line of the Chicago River as shown on the attached contract drawings. All dredging shall be performed to the clear depths and widths called for on said contract drawings unless otherwise ordered by the Engineer in writing. Payment for the above mentioned work of dredging shall be made by the Sanitary District to the Contractor at the unit price per cubic yard hereinafter specified for dredging. No payment shall be made for dredging, however, until the excavated material has been properly deposited in the designated dumping area. If in the prosecution of the work herein specified the Contractor deposits or otherwise places any material in either completed or uncompleted areas to be dredged hereunder, or in other than the designated dumping area, he shall remove and properly dis-

pose of such material free of any additional charge to the Sanitary District.

Dredging shall be performed in such a manner as not to damage or interfere with the operation of the existing bridges known as the old and new St. Charles Air Line bridges crossing the said Chicago River just north of Sixteenth Street. The Contractor agrees to leave such material within the limits of work under contract as may be necessary to insure the safety of said bridges, and to remove such material when ordered by the Engineer. It is expected that the new bridge now under construction, which is to replace the old bridge, will be completed in the near future. Articles 24 and 25 of General Conditions relating to Time and Liquidated Damages, shall not be considered as relating to the dredging of material so lett unexcavated. The dredging of the thirty (30) foot strip upon which the existing tracks and old bridge of the St. Charles Air Line are located is not included in this contract.

9. *Measurements.*

Payments will be made to the Contractor by the Sanitary District for dredged material measured by the method known as "Place Measurement" based on the measurements soundings and cross-sections of the Engineer. No payment shall be made for any dredging outside of the lines or below the bottom grades designated on the contract drawings unless specifically ordered by the Engineer.

10. *Disposal of Material.*

Dredged material shall be disposed of in Lake Michigan in strict conformity to the Act of Congress, approved June 23rd, 1910, entitled "An Act to prevent the dumping of refuse material in Lake Michigan at or near Chicago" and all amendments thereto, and in accordance with all ordinances of the City of Chicago.

In the event that the Contractor should desire to dispose of the dredged material in any place other than that above specified, the Contractor shall so notify the Chief Engineer and shall obtain said Chief Engineer's permission in writing designating the place where the Contractor will be permitted to deposit said dredged material. The disposal of dredged material shall be at all times subject to the approval of the Engineer.

It is understood that no material shall be dumped in the Chicago River, or in any place other than the designated dumping area, but if in the prosecution of the work under this contract, the Contractor accidently deposits or otherwise places material in the Chicago River he shall remove such material immediately when ordered by the Engineer, and shall dispose of same in the manner hereinbefore specified for disposal of material, free of charge to the Sanitary District.

11. *Cross Section to be Dredged.*

The purpose of this work is to provide a clear channel having a width of two hundred (200) feet between dock lines including a navigable depth of twenty-six (26) feet for a distance of fifty (50) feet on each side of the center line of the river as shown on the contract drawing. To obtain this channel, the Contractor shall remove such material within the limits hereinbefore designated as the Engineer shall determine necessary by his soundings and shall designate by his lines and stakes.

12. *Plant.*

The Contractor shall furnish all material, labor and plant required, including dredging plant and other necessary equipment for dredging and disposing of the dredged material and for performing all other work hereinbefore specified or collateral thereto. The cost of furnishing all material, labor and plant required, including the cost of moving said plant to any and all parts of the work, and making such changes in wires, poles, etc., as may be necessary shall be included in the unit prices hereinafter specified

13. *Precautions.*

The Contractor shall take all precautions necessary to protect all vessels or water craft nagivating the Chicago River, from any and all obstructions to navigation arising or growing out of the work covered by this contract. He shall display such lights and other danger signals as may be necessary for guiding and warning vessels, and shall furnish watchmen, fences, red lights and other guards that are necessary for the protection of persons and property, and shall be liable for all losses due to delays and damages sustained by vessels or other craft navigating the channel that may be due to or result from the work under this contract. The

cost of furnishing all labor and protections as above specified shall be covered by the unit price herein specified for dredging and no claim for damages or extra work on account of such labor and protections will be allowed.

14. *Misplaced Material.*

Should the Contractor, during the progress of the work, lose, dump, throw overboard, sink or misplace any material, plant or machinery which, in the opinion of the Engineer, may be dangerous to or obstruct navigation, he shall recover and remove the same with the utmost dispatch. The Contractor shall give immediate notice of the description and location of said obstructions, to the Engineer, and when required shall mark or buoy such obstructions until the same are removed. Should he refuse, neglect or delay compliance with the above requirement, such obstructions may be removed by the Sanitary District and the cost of such removal shall be paid by the Contractor or may be deducted by the Sanitary District from any money due or to become due the Contractor under this contract.

15. *Permits.*

The Contractor shall obtain all required licenses and permits and pay all charges and expenses connected therewith. He shall also conform to all municipal and Sanitary District ordinances and all regulations imposed by the United States Government in any manner affecting this work.

16. *Occupation by Sanitary District.*

The Sanitary District hereby reserves the right at any time either by its own employees or by any contractor, to enter upon, use and occupy for its corporate purposes any portion of the sites of the work hereunder or any portion of the right of way of the Sanitary District occupied by the Contractor in performing the work hereunder, provided such use and occupation shall not prevent the work herein specified from being performed by the Contractor.

GENERAL CONDITIONS.

Sanitary District Law.

Art. 1. The said contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to Create Sanitary Districts and to Remove Obstructions from the Des Plaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, and all acts amendatory thereof and supplementary thereto.

City Ordinances.

Art. 2. The said Contractor also agrees to carry on all work provided for in this contract in strict conformity with all ordinances of the City of Chicago and all Acts of Congress which in any way affect the performance of the work hereunder.

Omissions on Contract Drawings.

Art. 3. The Contract Drawings furnished form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or contract drawings.

Examination of Site.

Art. 4. All bidders for work under this contract are required, before submitting proposals to examine the sites of the work and adjacent premises, the various means of approach to the sites and the plans hereinbefore mentioned as being on file in the office of the Chief Engineer, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract also as to the facilities for delivering and for handling material and plant at the site, and for disposing of material to be removed from the site, and the conditions and difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist, or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make the necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time for the performance of the work.

Approximate Quantities.

Art. 5. It is expressly understood and agreed by the parties hereto that the quantities of the various classes work to be done and materials to be furnished under this contract, which have been estimated as stated in the advertisement and in the "Requirements for Bidding and Instructions to Bidders." attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done or for an extension of time for the performance of the work. If any error, omission, or misstatement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the contract drawings herein mentioned, and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Changes in Contract Drawings.

Art. 6. The Sanitary District reserves the right to make any changes in the specifications and Contract Drawings which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby. If such alterations increase the quantity of the work to be done, such increase shall be paid for according to the quantity of work actually done at the unit prices specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

Extra Work.

Art. 7. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District ,

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra

labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 8. In estimating the cost of extra work, the cost of material shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amounts paid for same as shown by the payrolls of the Contractor, with cost of indemnity insurance added, when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, if requested by the Chief Engineer, verify by his affidavit the correctness of the amounts paid for materials and labor. It is further agreed that in all cases of question or dispute arising or growing out of this contract in anyway regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of delay or of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision.

Art. 9. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents. The Contractor shall be guided by the lines, stakes, marks and grades given by them, and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Materials, Workmanship and Inspection.

Art. 10. All materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all work which, during the progress and before its final acceptance may become damaged from any cause, shall be removed and replaced by good and satisfactory work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work and to all points where material to be used in the work is manufactured, procured, stored or dumped and shall be allowed to examine any material furnished for use in the work under this contract.

All inspection of any and all material furnished for use in the work to be performed under this contract shall be made at the site of the work after the delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay the Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the extra time expended in performing any such inspection at said other points.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificate, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress cer-

tificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art. 12. All books and accounts kept by the Contractor in connection with this contract shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determinne the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, the cost of repairs to machinery, and other information required by the Engineer. The Contractor shall, on request, furnish the Engineer with copies of expense bills for transportation charges on all machinery, material and supplies shipped to or from the work under this contract.

Plant.

Art. 13. The Contractor shall furnish all material and supplies, plant, tools and implements, in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer all barricades and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the rates and prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 14. Whenever the Contractor shall be permitted or directed to perform work at night or on Sundays or holidays, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer and no extra compensation shall be allowed therefor.

Clearing Site.

Art 15. The Contractor further agrees to remove all materials, implements, barricades, falsework, debris and rubbish connected with or caused by said work immediately upon completion of the same and to leave the site of the work in perfect condition insofar as affected by the work under this contract.

Precautions.

Art. 16. The Contractor shall take whatever precaution may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident, from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 18. In accordance with the Rules and Regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employes such regulations in regard to cleanliness, and the disposal of garbage and wastes, as shall conduce to their health and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall make provision for an ample supply of suitable drinking water, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the right of way or property of said Sanitary District, easement, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 19. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District

from all liabilities, judgments, costs, damages and expenses that may in anywise come against said Sanitary District, or which may be the result of an infringement of any patent, by reason of the use of any materials, machinery, devices, apparatus or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 20. The Contractor shall take all necessary precautions for the protection of the building and dock of the Northwestern Elevated Railroad Company and the bridges known as the old and new St. Charles Air Line bridges, adjoining and adjacent to the work to be performed under this contract. If any damage shall be done by the Contractor or by any person or persons in his employ to said building or dock of the Northwestern Elevated Railroad Company or to said bridges or to the owner or occupants of any land or to any personal property adjoining, or in the vicinity of the work herein contracted to be done, the Engineer shall have the right to estimate the amount of said damage, and to cause the Sanitary District to pay the same to the said owner or occupant, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to keep and save harmless the Sanitary District from and to assume all liability for any and all damages to the building and dock of said Northwestern Elevated Railroad Company and the bridges known as the old and new St. Charles Air Line bridges, and to the owners, occupants and lessees of same that may in any way be due to or result from the work performed under this contract. Said Contractor also covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself or of his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District, for or on account of any such injuries or such damages received or sustained by any person or persons from said Contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employes; and the said Contractor further agrees that so much of the money due to him under and by virtue of this contract, as shall be considered necessary by The Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the Board of Trustees.

Employers' Liability Act.

Art. 21. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital service and the compensation provided for in the Act of the General Assembly of the State of Illinois entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10, 1911, in force May 1, 1912, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or deaths suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 22. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor will be re-

quired to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign, by power of attorney or otherwise, any portion of the moneys that may become due through the performance of this contract.

Liens.

Art. 23. If at any time during the progress of said work, the said Contractor shall fail or neglect to pay for any labor performed, material furnished or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make the payments hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any case said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons or corporation, for labor, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon or in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time.

The Contractor for the work under Division "B" agrees to begin the work covered by this contract immediately after the completion of work under Division "A" and upon receipt of written notice from the Chief Engineer that said work under said Division "A" has been completed, and further agrees to prosecute the same with all due diligence and to entirely complete the work under said Division "B" within sixty (60) working days.

Working days are hereby defined and agreed upon as days on which weather and lake conditions permit the towing of plant from the mouth of the Chicago River to the dumping ground and permit the prosecution of said work during at least eight (8) hours of the day between sunrise and sunset. It is agreed that the decision of the Engineer as to what constitutes a working day shall be final and binding on both of the parties hereto.

It is understood and agreed that Time is of the essence of this contract and that a failure on the part of said Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss and damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 25. It is therefore covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work herein specified under Division "B" within the time specified in Article 24, even though he is allowed to complete any one or more of said items of work, then said Contractor shall and will pay the said Sanitary District the sum of Twenty-five Dollars ($25.00) for each and every day the Contractor shall be in default in the time of completion of said work under said Division "B."

Said sum of Twenty-five Dollars ($25.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which the said Sanitary District will suffer by reason of such default and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of said work, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto. It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof,

and particularly the provisions in regard to Time and Liquidated Damages for delays.

Extensions or Additions.

Art. 26. In the event that any material alterations or additions are made as herein specified, which, in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case, the time of the completion of the work shall be extended by such a period or periods of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this paragraph shall not otherwise alter, change or invalidate the provisions of this contract, with reference to "Liquidated Damages" and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art 27. The Contractor shall delay or suspend the progress of the work or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided, that in event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay, or delays, suspension or suspensions.

Unavoidable Delay.

Art. 28. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by necessary or unavoidable act or delay of the Sanitary District or by riot, insurrection, war, pestilence, strikes, acts of public authorities, fire, lightning, earthquake, cyclone or through any default of other parties under contract with said Sanitary District, then the time herein fixed for the completion of such part of said work, so delayed, shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowances shall be made unless a claim therefor in writing is presented to the Engineer within four (4) days after the commencement of such delay. And it is further expressly agreed that said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of any delays resulting from any of the causes above specified, except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. Said Engineer shall decide the number of days that said Contractor has been so delayed, and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 29. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character, and in the time herein specified or if said Contractor shall fail financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by the said Contractor; or if the Contractor shall lose control of said work for any cause whatsoever, except by act of God or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer; or if in the opinion of the Engineer the Contractor refuses or neglects to use measures to protect the said materials and adjacent structures, work from damages; or if in the opinion of the Engineer the Contractor is guilty of carelessness or incompetency in the execution of said work; or in the opinion

of the Engineer the said work has been or is being delayed by the Contractor; or if in the opinion of the Engineer the rate of progress is not such as to insure the completion of the work within the time specified or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor is wilfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Sanitary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or any part thereof, that may be designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid, by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in this section specified, the said Sanitary District shall have a lien upon all the materials, supplies, machinery, implements and tools of the Contractor for the purpose hereinafter specified; and the said Sanitary District may thereupon immediately take possession of all said materials, supplies, machinery, implements and tools, for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract, and in completing the said work by contract, said Sanitary District may use such materials, supplies, machinery, implements, tools and plant as may be the property of said Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other contractors if all or any part of said work is completed by contract, and any sum or sums of money paid by the Sanitary District for the cost of repairs and replacements upon machinery, implements, tools and plant of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance and as compensation for accidental injuries or death suffered by employes in the course of their employment in the performance of said work under the employers' liability act of the State of Illinois in force July 1, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the Sanitary District out of any moneys that may be due, or may at any time thereafter become due to said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid then the Sanitary District may sell all materials, supplies, machinery, implements, tools and plant then on hand, obtained from said Contractor, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of said property at such sale shall be credited to said Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and his bondsmen shall be liable to pay the amount of said deficiency, and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 30. The Contractor for the work under Division "B" shall furnish a bond for the faithful performance of such contract in the penal sum of twenty-five thousand dollars ($25,000.00). Said Contractor shall furnish bondsmen whose financial standing is satisfactory to the Board of Trustees of said Sanitary District, and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

The said Contractor for Division "B" agrees to accept the following prices as full compensation for furnishing all the equipment and materials, and for doing all the work contemplated and specified in this contract, also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work, and the whole thereof, in full compliance with the contract drawings and specifications, and the requirements of the Engineer under them, to-wit:

For dredging, including the disposal of the excavated material, as specified, the sum of one and ninety-nine one-hundredths dollars ($1.99) per cubic yard, place measurement.

For pulling piles, including the removing of the same from the site of the work, as specified, the sum of eight dollars ($8.00) per pile.

For removing old timber dock, as specified, the sum of eight dollars ($8.00) per lineal foot.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents, and patented materials, appliances and processes used in the work described in the specifications. Before final payment is made, the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 32. The said Sanitary District agrees to pay said Contractor the sums herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 33. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials, except in the manner set forth in this contract, nor until all the stipulations, provisions and conditions, hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate pay, and, it hereby binds itself to pay the said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the successors, heirs, and legal representatives of said Contractor.

In Witness Whereof, on the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its ..... and to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.

By.....,

Chairman of Its Committee on Finance.

.....(Seal)

.....(Seal)

.....(Seal)

Attest:

.....
Clerk.

Attest:

.....
Secretary.

Approved ....., 1919.

.....
Division Engineer.

.....
Chief Engineer.

.....
Assistant Attorney.

.....
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, The Great Lakes Dredge and Dock Company, a corporation organized under the laws of the State of New Jersey, as principal, and..... ..... as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of twenty-five thousand dollars ($25,000.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated thtis 12th day of August, A. D. 1919.

THE CONDITIONS OF THE ABOVE OBLIGATION IS SUCH, That whereas the above bounden Great Lakes Dredge and Dock Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 12th day of August, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the widening of the south branch of the Chicago River just south of Van Buren Street and also just north of Sixteenth Street, in the City of Chicago, County of Cook, State of Illinois, as specified under Division "B" in the foregoing contract.

Now, if the said Great Lakes Dredge and Dock Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the drawings thereto attached and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees, which may in anywise come against said The Sanitory District of Chicago in consequence of the awarding of such contract, or which may in anywise result from the carelessness or neglect of said Great Lakes Dredge and Dock Company, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to the said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for first aid, medical, surgical and hospital attendance and compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or deaths suffered in the course of employment, approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Great Lakes Dredge and Dock Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person and shall repay any overpayment, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment, rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by care-

lessness or neglect of said Great Lakes Dredge and Dock Comapny or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or deaths suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Great Lakes Dredge and Dock Company, shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

.....(Seal)
.....(Seal)
.....(Seal)

Approved as to form .....A. D. 1919:

.....
Assistant Attorney.
.....
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Manager of the Real Estate Department in which he states that in order to facilitate the work of his Department in making an inspection of the real estate of the Sanitary District, which covers many miles of territory along its various channels, to prevent squatters from occupying portions of said real estate, and ascertain if tenants are complying with the terms of their leases, it is necessary that his Department have the use of a Ford automobile which can be purchased for $700.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Manager of the Real Estate Department be, and he is hereby, authorized and directed to purchase a Ford automobile for the use of his Department provided the cost of same does not exceed the sum of $700.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a request from the Attorney and the Clerk of the District to make certain transfers of funds from unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which insufficient appropriations were made.

Your Committee having considered the matter, is of the opinion that said requests should be granted, and, therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make the following transfers in ap-

propriations for the year 1919 in accordance with the requests of the Attorney and Clerk attached hereto:

Department of Law

From Account No. 555—
Books, maps and charts.....$400.00
To Account No. 53—
Furniture and office equipment. 400.00

Department of the Clerk of the District

From Account No. 86—
Judgments and Claims.....$360.00
To Account No. 53—
Furniture and office equipment $175.00
To Account No. 289—
Impersonal Service, N. O. C. 185.00
$360.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a request from the Manager of the Real Estate Department to make a transfer of funds from one unexpended account to another in order to provide funds for the payment of expenditures for which no appropriation was made.

Your Committee having considered the matter, is of the opinion that said request should be granted, and, therefore, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make the following transfer in appropriations for the year 1919 in accordance with the request of the Manager of the Real Estate Department attached hereto:

Department of Real Estate.

From Account No. 13—
Compensation for personal services other than salaries and wages.....$700.00
To Account No. 5271—
Motor vehicle equipment..... 700.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (page 113 of the Proceedings), sets up in the Department of Engineering (Sanitary Division) (item 5), one position with salary attached thereto in the sum of $2,100.00.

Your Committee further reports that

the Committee on Employment has requested that the salary attached to said position be adjusted to meet the requirements of the Department of Engineering (Sanitary Division) which can be done without increasing said sum of $2,100.00 heretofore appropriated.

Your Committee having considered said request, is of the opinion that same should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make adjustment of the salary set up under the Department of Engineering (Sanitary Division) in the Appropriation Bill for the year 1919 in accordance with the requirements of the Committee on Employment as follows:

Department of Engineering (Sanitary Division) Account No. II. Salaries and Wages of Regular Employes.

Change from Assistant Engineer at rate of $250.00 per month 1	$2,100.00
To Assistant Engineer at rate of $250.00 per month 1	1,850.00
To Chemical Assistant 2½ months, at rate of $100.00 per month 1	250.00

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith transmits to the Board the following grant of easement from William Bauer and Minnie Bauer, his wife, whereby said grantors, for the nominal consideration of $200.00 grant to The Sanitary District of Chicago a perpetual easement to construct and operate an intercepting sewer, with appurtenances thereto, in the Desplaines River District, in, under and through certain real estate owned by said grantors on certain terms and conditions therein specified.

Your Committee further reports that it has examined said grant of easement which has been approved by the Chief Engineer and Attorney, and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee of Finance of the Board of Trustees of the Sanitary District and the Clerk, be, and they are hereby, authorized and directed to execute in duplicate said form of easement which is hereto attached, same having been duly executed by said grantors, and it is further

Ordered, That the Chairman of the Committee on Finance and the Clerk, be, and they are hereby, authorized and directed to draw a warrant in the sum of $200.00 payable to the order of William Bauer and Minnie Bauer and deliver the same to them in full payment of the consideration for said grant.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying orders passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 14, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the Ready & Callaghan Coal Company with the Southern Surety Company thereon as surety, for the faithful performance of its contract for the construction of a sprinkling filter and appurtenances in the Village of Morton Grove for the Sanitary District and therefore recommends the passage of the following order:

Ordered, That the bond of the Ready and Callaghan Coal Company for the faithful performance of the above specified contract, said bond being in the penal sum of $18,769.88, be, and the same is hereby, approved, and it is further

Ordered, That the form of said contract and bond be printed in the proceedings of the Board.

Respectfully Submitted,

JAS. H. LAWLEY,
Chairman.

GEORGE W. PAULLIN,
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

The following is the contract and bond of the Ready & Callaghan Coal Co.:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR THE CONSTRUCTION OF A SPRINKLING FILTER WITH APPURTENANCES IN THE VILLAGE OF MORTON GROVE.

THIS AGREEMENT, Made and entered into this 17th day of July, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated The Sanitary District, and Ready & Callaghan Coal Co., a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for the construction of a sprinkling filter with appurtenances, in the Village of Morton Grove, Township of Niles, County of Cook, State of Illinois.

The work done and materials furnished shall be strictly pursuant to and in conformity with the specifications and plans, which are signed, attached hereto, and made a part of this agreement. The said specifications and plans are intended to cooperate, and any work appearing upon the plans and not mentioned in the specifications, or mentioned in the

specifications and not appearing upon the plans, shall be executed according to the true intent and meaning of the said specifications and plans, the same as though the said work was contained and described in both.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and his properly authorized agents, by whose measurements and calculations the quantities and amounts (including extras) of the several kinds of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor, that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide every question which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein, they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the words "the work" are used herein, they shall be interpreted to mean the work, including all material, labor, tools, and all appliances and appurtenances, necessary to perform and complete everything specified or implied on the plans or in this contract, in full compliance with all the terms and conditions hereof.

Wherever the word "section" is used herein, it shall be understood to refer to the entire section of the specification following the number referred to in parenthesis.

The sections are numbered consecutively.

Wherever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

Sprinkling Filter with Appurtenances, Morton Grove.

SPECIFICATIONS.

Location.

(1) The sprinkling filter with appurtenances under this contract is to be constructed upon property owned by the Sanitary District, in the Village of Morton Grove, Township of Niles, County of Cook, State of Illinois.

Description.

(2) The work consists of building a sprinkling filter, brick building to cover sprinkling filter and pumps, secondary settling tank, sludge drying beds and cover for existing Imhoff tank. Various appurtenances are to be furnished, including sewer pipe, manholes, manhole frames and covers, ladder rungs, pumping equipment, electrical wiring, and miscellaneous work. The work also includes removing the old bridge abutment, excavating the old roadway on the north end of the property and making an embankment along the bank of the North Branch of the Chicago River, between Dempster Street and the fill of the Chicago, Milwaukee & St. Paul Railway.

The work under this contract includes all the work embraced by these specifications and the accompanying plans, which are made a part hereof. In the event of any discrepancy between the plans and these specifications, the decision of the Engineer shall be decisive thereon. The figured dimensions on the plans are to be taken as correct, but the Contractor is required to carefully check all dimensions of structures before beginning work thereon. Should any errors be discovered, the Engineer's attention shall be called to the same, and

the proper corrections made. All notes on the plans shall be carefully observed by the Contractor, and are made a part of this contract. All elevations shown on the plans or herein specified are referred to Chicago City Datum (C. C. D.).

The Sanitary District will require that the work be prosecuted with all speed, and with the least inconvenience to the public.

Character of Material.

(3) Profiles and contours of the ground are shown on the plans hereto attached. These profiles and contours are believed to be reasonably correct, but do not purport to be absolutely so, and together with any schedule of quantities are presented only as an approximation. It is not expected that rock will be found. The Contractor must satisfy himself regarding the character or amount of peat, clay, sand, quicksand, gravel, glacial drift, rock and all other material to be encountered and work to be performed.

Underground Structures.

(4) Various underground structures are shown on the plans hereto attached, including water pipes, sewers, hydrants, steam railway tracks, piers under elevated tracks and bridges, and manholes for various purposes. The location and dimensions of such structures where given, are believed to be reasonably correct, but do not purport to be absolutely so. All known underground structures are plotted on the plans and profiles for the information of the Contractor, but information so given is not to be construed as a representation that such structures will be found or encountered as plotted. Other structures may also be encountered not shown on the plans. All structures encountered shall be taken care of by the Contractor at his own expense, except such structures as the owners thereof are required to remove or maintain in accordance with existing ordinances of the Village of Morton Grove.

The Sanitary District has obtained the information on underground structures given herein and shown on the plans and profiles from the best available sources, including a survey of the ground, so far as such structures appear at the surface, from the records of the Village of Morton Grove, from various public utility companies, including the Chicago Telephone Co., Western Union Telegraph Co., Postal Telegraph Co., Public Service Company of Northern Illinois, and Chicago, Milwaukee and St. Paul Railway Co.

ITEM 1. EARTH EXCAVATION.

Description.

(5) The Contractor shall make, in open cut, to the width and depth necessary for the proper construction of the sprinkling filter, secondary settling tanks, sludge bed, connecting sewers, etc., according to the plans, all excavations required for the construction of the sprinkling filter and appurtenances, and shall excavate any other material which, in the opinion of the Engineer, is desirable, for any purpose appurtenant to the construction of the work.

Excavation shall include clearing the site of the work, the loosening, loading, removing, transporting, and disposing of all materials, wet or dry, necessary to be removed for purposes of construction, the sheeting and bracing, the draining and backfilling of trenches and pits, the supporting of structures above and below ground, and all incidental work.

Clearing.

(6) The site of all excavations shall be first cleared of all trees, fences (except as specified herein), lumber, walls, stumps brush and rubbish, which shall be removed or disposed of in a satisfactory manner. The removal of the east abutment of the old highway bridge will be paid for by the lump sum specified under Item 16.

Trenching and Trimming.

(7) The trenches between the lines of sheeting must be of sufficient width to permit the work to be constructed in the manner and of the size specified. Wherever the nature of the ground will admit, the bottom of the excavation is to have the shape and dimensions of the outside of the structure. In the excavation of the settling tanks, the bottom is to be trimmed closely to the surface required for the finished bottom, and in order to secure this shape, the Contractor shall provide a form or pattern by which the bottom can be trimmed. The Contractor shall furnish all slope boards, stakes and lines neces-

sary to indicate the finished earth surface in all excavations.

Unauthorized Excavation.

(8) Wherever the excavation is carried beyond or below the lines and grades given by the Engineer, the Contractor shall at his own expense refill all such excavated space with such material and in such manner as may be directed, in order to insure the stability of the various structures. Beneath all structures, space excavated without authority shall be refilled with concrete by the Contractor and at his own expense.

Additional Excavation.

(9) It is expected that satisfactory material for foundation will be found at the elevations shown on the drawings, but in case the materials encountered are not suitable, or in case it is found desirable or necessary to go to an additional depth, the excavation shall be carried to such additional depth as the Engineer may direct. Additional depth of excavation so ordered, and concrete ordered for filling such additional excavation will be paid for at the respective unit prices herein specified for excavation and additional concrete.

Shoring.

(10) All trenches and other excavations shall be properly sheeted and braced, to furnish working conditions acceptable to the Engineer.

Removal of Timbering.

(11) If required, all timbering, including sheeting, bracing or other supports shall be removed and all voids carefully filled as directed. If any timbering is ordered in writing by the Engineer to remain in place, such timber shall be cut off as directed, and that remaining in place will be paid for under Item 23 at the unit price of thirty dollars ($30.00) per thousand feet board measure, as specified therein, but no allowance will be made for loss or waste.

Removal of Water.

(12) The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water or sewage entering the excavations or other parts of the work, and keep said excavations dry until the structures to be built therein are completed. No masonry shall be laid in water nor shall water be allowed to rise over masonry until the concrete or mortar has set at least 24 hours. The Contractor shall, when required by the Engineer, pump out the settling tanks, pump wells and connections so that the same can be inspected before the final acceptance thereof.

Disposal of Material.

(13) Material excavated shall be disposed of in backfilling, as may be directed to the lines and grades given by the Engineer.

Surplus material excavated but not required for backfilling shall be deposited in the embankment to be constructed around the plant. No additional payment will be made for this deposit, other than the price specified to be paid per cubic yard for rolled embankment, complete, under Item 3. All surplus material excavated and not otherwise disposed of in backfilling or in embankments, shall be deposited by the Contractor in the low area on the south end of the property of the Sanitary District, as the Engineer may direct, within the lines and grades given by him.

Backfilling.

(14) Unless otherwise specified, all trenches or excavations around structures shall be backfilled up to the original surface of the ground or to such grades as shall be directed. The backfilling shall be done as compactly as possible, and the material shall be moistened and well tamped in such a manner as to prevent after-settlement. If required, the trenches and excavations shall be flooded with water while the backfilling is being placed. The filling shall be made with the best material available, selected especially for the purpose and free from stones over three (3) inches in diameter, particularly immediately in and around pipe sewers.

Rock.

(15) For all rock excavation, in addition to the price per cubic yard of earth excavation, the Contractor will receive a compensation of THREE DOLLARS ($3.00) per cubic yard, as herein specified under Item 2.

Protection of Streets and Traffic.

(16) The Contractor shall make provisions at all streets for the free

passage of vehicles and foot passengers. The sidewalks must not be obstructed, unless it is necessary for the execution of the work. Neither the materials excavated nor the materials or plants used in the construction of the work shall be so placed as to endanger the work or prevent free access to the existing plant and sewer manholes, fire hydrants or water valves in the vicinity.

Care of Existing Structures.

(17) All existing poles, trees, fences, sewer, water, gas or other pipes or conduits, manholes, buildings, building or tank foundations, bridges, bridge foundations, or other structures along or on the site of the work shall be supported and protected from injury by the Contractor, during the construction and until the completion of said work. The Contractor shall be liable for all damages done to such poles, trees, fences, pipes, buildings, and structures, as above provided, and shall save and keep the said Sanitary District harmless from any liability or expense for injuries, damages or repairs to the same.

For all existing fences taken up by the Contractor and ordered by the Engineer to be replaced in other locations than those from which the fence was taken, the unit price per lineal foot for fence replaced will be paid as specified under Item 15, when ordered by the Engineer. Fences taken up and replaced in the original locations will be at the expense of the Contractor, no payment being made therefor under Item 15.

Measurement.

(18) All earthwork will be measured in excavation and will be measured only once. Excavations for masonry structures will be measured upon vertical planes passing through the outside of the structures and from the surface of the ground to the neat lines of the bottoms of the structures or to such greater depths as the Engineer may order. All excavations for pipe lines shall be measured between vertical planes two (2) feet farther apart than the inside diameter within the barrel of the pipe, and from the surface of the ground to the elevation of the outside invert of the pipe. All other excavation will be measured within the lines and grades actually given by the Engineer.

Payment.

(19) The price specified to be paid per cubic yard for excavation under Item 1 shall include the excavation of all materials in place without classification, other than rock, as specified in Section 15 and under Item 2, and shall include all clearing, backfilling to the original surface of the ground, the disposal of material in embankments, or otherwise, the clearing up of the ground, removal of all water, all pumping, shoring and other expenses incident to the work of earth excavation, and the furnishing of all machinery, tools, labor and appurtenances necessary to complete the work as specified.

ITEM 2. ROCK EXCAVATION.

Description.

(20) It is not expected that any rock or boulders will be encountered in the excavation. If such material is found it will be paid for at the unit price of THREE DOLLARS ($3.00) per cubic yard, under this item, in addition to the payment for earth excavation at the unit price specified to be paid per cubic yard under Item 1.

The Contractor shall excavate within the lines and grades shown on the drawings or given by the Engineer, and shall satisfactorily dispose of, in fills or spoil banks, all ledge rock or boulders wich cannot be handled with picks and shovels with reasonable facility. When placed in fills, the pieces of rock and boulders shall be kept separated so that the earth may fill solidly around them and prevent settlement later. Large stones shall not be placed in rolled embankments unless especially permitted by the Engineer.

All the sections in the preceding item on Earth Excavation shall be considered to apply to Rock Excavation, in particular as regards shoring, removal of water, unauthorized excavation, and disposal of materials.

Measurement.

(21) In estimating the number of cubic yards of rockwork in the excavation for pipes, tanks, or other structures, the measurement will be based on the yardage in place, as determined by the lines and grades of the Engineer; a distance of six (6)

inches, however, being allowed and no more, outside the neat lines of the pipes, tanks or other structure in question when ledge rock is removed from beneath or at the sides of said structures. Boulders four (4) cubic feet and over in size will be measured as rock excavation. Hard pan, boulder clay, shale and similar material shall not be classed as rock, although it may be more economical to remove the same by blasting. The term "rock" is to be interpreted to include only boulders, or solid limestone, or sandstone rock found in its original bed.

No claim for an amount of money beyond the contract price of the work will be entertained or allowed on account of the character of the ground in which the trench or other excavations are made, except for the rock work heretofore specified.

Payment.

(22) For all rock excavation, including the disposal of the same, occurring under this contract as herein specified, the unit price of THREE DOLLARS ($3.00) per cubic yard will be paid, which sum is agreed by the Contractor to be in full compensation for all labor, materials and appurtenances necessary to complete the work as specified.

ITEM 3. ROLLED EMBANKMENT.

Location.

(23) The rolled embankment consists chiefly of the fill above the original ground surface around the sludge bed, settling tanks and sprinkling filters where ordered by the Engineer, and in such other places as may be ordered in writing by the Engineer.

Embankment.

(24) All embankments shall be constructed to the lines and grades given by the Engineer, and the Engineer shall, in giving the lines, take into account the probable settlement of the material therefor. The materials for building the embankments shall be obtained from the excavations made under item 1. The surface on the ground to be covered by an embankment shall first be cleared and grubbed and the loam removed, as specified under Sections 5 to 18, inclusive, and shall then be ploughed, furrowed or picked, so as to make a bond with the embankment, and on sloping ground the surface shall be stepped, if so directed. The materials for the embankments shall be placed in layers not exceeding six (6) inches in thickness, and each layer shall be thoroughly rolled with a grooved or smooth roller weighing not less than one thousand (1,000) pounds per lineal foot of width, and not less than four (4) feet wide. Where the location does not admit of rolling, all layers shall be tamped with heavy rammers, or otherwise thoroughly compacted in a satisfactory manner. The embankments shall be constructed with extreme care and with carefully selected earth and gravel, free from all perishable matter and from stones measuring over three (3) inches in their greatest dimensions. The materials shall be selected and so spread as to make as solid an embankment as possible. The materials shall not be placed in the embankments too wet to allow of proper solidification and rolling, and if too dry they shall be moistened by sprinkling with water. From time to time during the construction of the embankment, and if so required, three (3) times after its completion, the embankment shall be so thoroughly saturated with water that it will stand upon the surface. Embankments shall not be built during freezing weather, nor with frozen material, nor shall they be built when the materials already placed in the embankments are frozen. Top soil or loam may be used for surfacing, as specified in Item 4.

Measurement.

(25) Under this item will be measured, inside the lines and grades given by the Engineer, all embankments which are constructed and rolled as above specified. In order to allow for settlement, embankments will not be measured for final estimate in any case within thirty (30) days from the completion of the embankment.

Payment.

(26) The unit price specified to be paid per cubic yard for rolled embankment shall include the placing and rolling of all materials in embankments above the surface of the ground, and shall include the furnishing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 4. LOAM.

Description.

(27) Under Item 4 the Contractor shall furnish and place loam or top soil as directed by the Engineer. Loam so furnished shall be "black soil" of a quality suitable for use on the surface of the premises for seeding and planting purposes. In general, it will be used for surfacing and dressing slopes to depths of about twelve (12) inches. It shall be placed when and as directed by the Engineer, in thin layers which shall be lightly rolled and brought to the grades and lines directed. The surfaces on which it is to be placed shall be first thoroughly ploughed and all lumps broken up with a disc harrow.

Measurement and Payment.

(28) Loam furnished and placed under this item shall be measured in place within the lines and grades given and paid for at the unit price per cubic yard specified, which price shall include the furnishing of all tools, labor and materials necessary to the performance of the work as specified. In order to allow for settlement, measurements for payment will not be made until at least thirty (30) days have elapsed after the completion of the work. No work done and paid for under Items 1 or 3 shall be paid for again under this item.

ITEM 5. SAND FILL.

Description.

(29) At places designated by the Engineer, principally in fills upon which concrete is to be placed, the use of sand may be required. Sand for this purpose shall be well graded silicious material substantially free from particles larger than one-quarter (¼) inch and shall be free from loam and perishable material. It shall be thoroughly tamped or rammed into place to the grades established by the Engineer to form an unyielding foundation. If required, fills made of sand shall be flooded with water while in the process of making. If required, the fill may be brought above the finished grade and subsequently excavated thereto. Such excavation shall be paid for under Item 1.

Measurement and Payment.

(30) Sand fill furnished and placed under this item shall be measured in place within the lines and grades given by the Engineer and paid for at the unit price per cubic yard specified, which price shall include all labor, tools and material required for doing the work. No material excavated on the site of the work and placed in fill as specified under Items 1, 2 or 3 shall be paid for under this item.

ITEM 6. ROADWAYS AND WALKS.

Description.

(31) The Contractor shall furnish the material for and construct complete the gravel roadway and walks shown on the plans, or ordered.

Foundation.

(32) The excavation for embarkment shall be left at a point slightly above the required subgrade, and then the earth thoroughly compacted by rolling with a roller weighing at least one thousand (1,000) pounds per lineal foot, and not less than three (3) feet long. The earth foundation shall then be trimmed smoothly and evenly to the exact sub-grade. In case soft or spongy earth or other unsuitable materials are encountered in the foundation, they shall be removed and the space filled in with suitable material placed in layers not over four (4) inches in thickness, each layer being thoroughly compacted by rolling or ramming.

Gravel and Rolling.

(33) After the foundation has been suitably prepared, it shall be covered to the required thickness with good, clean graded, broken limestone or gravel, in general from one-quarter (¼) inch to two (2) inches in size, free from stones which will not pass through a two (2) inch ring in any direction, and containing not more than twenty-five (25) per cent of sand, screenings, or other fine material which will pass through a screen having a clear mesh of one-fourth (¼) inch. The gravel shall be placed in two (2) layers of equal thickness. Each layer shall be well moistened with water and rolled with a grooved roller, weighing not less than one thousand (1,000) pounds per lineal foot and not less than three (3) feet long, until the gravel is thoroughly compacted and solid. All stones exceeding one (1) inch in diameter shall be raked from the surface of the upper layer of gravel before and dur-

ing the rolling. Should any depressions appear after the last rolling, they shall be filled with broken stone or gravel of suitable size and then thoroughly compacted by rolling. The roadways and walks when finished shall correspond exactly in grade and and cross-section to the lines and grades given by the Engineer. Crushed stone or gravel used as a foundation for slope paving under Item 17 shall also be included under this item.

Measurement.

(34) Under this item will be measured all broken stone or gravel placed in the roadways and walks inside of the lines and grades given by the Engineer and after it has been rolled and all crushed stone or gravel placed as a foundation for slope paving or elsewhere in the work, if ordered by the Engineer.

Payment.

(35) The unit price specified to be paid per cubic yard for broken stone or gravel roadways and walks and for foundations for paving of slope under Item 6, shall include the preparation of the sub-grade and furnishing and placing of all the broken stone or gravel, and shall include the furnishing of all labor, tools, materials, and appurtenances necessary to complete the work as specified.

ITEM 7. SEEDING AND PLANTING.

General.

(36) The Contractor shall prepare and seed the graded areas covered with loam, as required inside the boundaries indicated on the plans, and plant the shrubbery and trees, as shown on the plans, or ordered by the Engineer.

Preparation of Ground.

(37) Before the top soil is stripped the Contractor shall remove all weeds and rubbish, in a manner satisfactory to the Engineer.

After the top soil is stripped and after the backfill or deposit of surplus excavation has been brought approximately to grade, the Contractor shall work over the said fill to break up all lumps and compact the same, by rolling, ploughing, harrowing, or a combination of all three. After this has been done, the work hereinafter specified shall be performed when ordered by the Engineer.

Before the loam is distributed and graded the Contractor shall grade the surface of the backfill and the surface left bare by stripping the top soil, and thoroughly plow the entire surface, to be seeded and planted, breaking up all lumps with a disc harrow. The loam shall then be distributed and graded. Next, ground limestone shall be scattered evenly and uniformly over the entire surface to be seeded and thoroughly worked in with a harrow or cultivator or other suitable apparatus. The ground limestone shall be clean limestone material, specially ground, so that at least eighty (80) per cent will pass through a screen of two hundred (200) meshes per lineal inch. Two thousand (2,000) pounds of ground limestone shall be added per acre.

Seeding.

(38) The surfaces to be seeded shall be carefully prepared and raked over. All weeds shall be removed. The surfaces shall be seeded with grass seed, at a proper season of the year for growing, approved by the Engineer. The grass seed shall be of the best quality, equal to the best quality furnished by Vaughan's Seed Store of Chicago. On all surfaces, the grass seed shall consist of a mixture of blue grass and red top in equal portions. At least one hundred (100) pounds of grass seed per acre shall be used. In addition to the grass seed, shall be added six (6) pounds of white clover per acre. Immediately after the surfaces have been seeded they shall receive a sufficient amount of raw bone fertilizer, not less than four hundred (400) pounds per acre, and shall be well rolled. Care shall be taken to have all surfaces conform to the proper lines and grades, and any sliding or settling which may occur before the final acceptance of the work shall be repaired by the Contractor.

Planting.

(39) The Contractor shall furnish and plant where shown on the plans or ordered by the Engineer, the following shrubs and trees, of the size or ages shown, or their equivalent as ordered. The planting shall be of the best grade of healthy stock furnished by Vaughan's Seed Store or equal.

Each shrub or tree shall be set in a pocket of loam of a size and depth

approved by the Engineer. In general at least a hole three (3) feet deep, and three (3) feet in diameter shall be dug for every tree and filled with loam. For every shrub a hole two (2) feet deep and two (2) feet in diameter shall be dug. The loam so used will be included for measurement under Item 4, but will be measured only once. No excavation for planting trees or shrubs will be paid for at the unit price specified to be paid under Item 1 for excavation.

Shrubs shall be of healthy stock, three (3) years old, selected and bushy. The Contractor shall furnish the designated number of shrubs of each of the following species:

Number	Species
5	High bush honeysuckle.
5	Mock orange (Philadelphus grandiflorus).
50	Barberry (Berberis Thunbergii).
5	Red Dogwood (Cornus Siberica).
50	Privet (Ligustrum Amurense).
5	Weigelia.
50	Spiraea von Houttei.
5	High bush Cranberry.
5	Lilac (assorted).

The Contractor shall furnish five (5) trees each, of the following species:

Carolina Poplar (6 to 8 ft. high).
Mountain Ash (8 to 10 ft. high).

Maintenance.

(40) All seeded surfaces shall be carefully looked after and tended by the Contractor to produce and maintain grass, shall be watered and the grass cut when necessary, and shall be turned over to the Sanitary District in good condition, with growing grass, after the first cut, on the final acceptance of the work. The grass shall be well rolled after the first cut. Bare spots shall be re-seeded at the expense of the Contractor. The shrubs and trees shall be watered and pruned as required, and turned over to the Sanitary District, growing, in good healthy condition, on the final acceptance of the work. The Contractor shall furnish a maintainance bond for one (1) year from the final acceptance to guarantee living shrubs and trees, and the replacing of all dead, diseased or weak stock by satisfactory stock, at his own expense.

Payment.

(41) The lump sum specified to be paid for seeding and planting under Item 7 shall include the weeding, plowing and preparation of the ground, the furnishing and placing of the limestone, fertilizer, seed, shrubs and trees, the excavation and backfilling for shrubs and trees, the maintenance, and shall include the furnishing and placing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 8. SPRINKLING FILTER AND PUMP WELL.

Work Included.

(42) Under Item 28 the Contractor shall furnish all materials for (except steel reinforcement, pumping equipment and materials in superstructure of filter and pump-house) and construct complete the sprinkling filter and pump well, as shown on the plans and specifications in detail under the following sections of these specifications:

A. Concrete.
B. Steel reinforcement.
C. Underdrainage and floor system.
D. Vent pipes.
E. Cast-iron pipe and specials.
F. Wrought iron pipe, fittings and gate valves.
G. Iron castings.
H. Structural and miscellaneous iron and steel.
I. Filtering material.
J. Splash cups and appurtenances.

A. CONCRETE.

Description.

(43) All the concrete used in the construction of the various structures under Item 8 shall be made and placed in accordance with the following general specifications, supplemented by the specifications given under other headings.

Included under this item are the sprinkling filter substructure, including floor, walls and columns, and the pump pit and foundations, and all concrete shown on the plans or specified to be paid for under the lump sum to be paid for Item 8.

Proportions.

(44) Concrete shall be divided into two (2) classes of mixtures, to be used as herein specified.

Class A concrete shall be composed of substantially one (1) volume of cement, two (2) volumes of sand, and four (4) volumes of gravel or broken stone. This shall be used in thin work,

the floor, walls and columns of the sprinkling filter and pump well, reinforced work, and in all other parts of the work, unless otherwise specified or directed.

Class B concrete shall be composed of one (1) volume of cement, two and one-half (2½) volumes of sand, and five (5) volumes of gravel or broken stone. This shall be used in backing pipes, or otherwise, as specified or directed by the Engineer.

The sand and gravel or broken stone shall be so graded in size that the cement shall more than fill the voids in the sand, and sand and cement shall more than fill the voids in the broken stone or gravel. One bag of cement, weighing at least ninety-four (94) pounds net, shall be regarded as having a volume of one (1) cubic foot, and the sand and gravel shall be measured loose.

If required, the mixture shall be modified as directed by the Engineer, by changing the relative volume of sand and ballast, but keeping the aggregate of the volume of sand and ballast the same. The proportions shall be determined by volume, the sand and ballast when measured being packed not more closely than by throwing them in the usual way into a barrel or box. Suitable measuring devices shall be provided by the Contractor.

Portland Cement.

(45) The cement shall be first-class Portland cement of a reputable brand satisfactory to the Engineer. It shall be delivered in cooperage or in bags and stored in weather-proof buildings having wooden floors raised above the ground, and sufficient stock shall be kept on hand to allow at least twelve (12) days for testing. All necessary facilities shall be provided by the Contractor to permit of the inspection of the individual shipments, each of which shall be kept separate. All unsatisfactory cement shall be promptly removed from the work. The cement shall conform to the most recent standard specifications of the Bureau of Standards of the U. S. Department of Commerce, Washington, D. C., the same being the United States government specifications for Portland cement. Circular No. 33 of the Bureau of Standards, issued July 1, 1913. Tests will be made in general accordance thereto, with limits as follows:

Specific gravity shall be not less than three and one-tenth (3.1).

Fineness shall be such that ninety-two (92) per cent of the cement by weight shall pass through the number one hundred (100) sieve, and seventy-five (75) per cent shall pass through the number two hundred (200) sieve.

Time of setting. The cement shall not acquire its initial set in less than forty-five (45) minutes and must have acquired final set within ten (10) hours.

Tensile strength. Briquettes after being kept the time specified shall develop a tensile strength per square inch as follows:

Age	Neat Cement	1 Cement, 3 Sand
24 hours	175	...
7 days	500	200
28 days	600	275

Soundness. Pats shall be satisfactory for twenty-eight (28) days in air, as well as one (1) day in air and twenty-seven (27) days in cool water, and also in steam for five (5) hours after hard set.

Sand.

(46) Sand for concrete and mortar shall be silicious material, well graded from fine to coarse, and not more than six (6) per cent shall pass through a sieve one hundred (100) meshes per lineal inch, and not more than five (5) per cent shall be retained on a screen having one-quarter (¼) inch holes. Sand used in mortar for brickwork or tile pipe shall not contain particles retained by a screen having four (4) meshes per lineal inch. All sand shall be clean, hard, free from soft particles, vegetable matter or other deleterious material, and shall be subject to the approval of the Engineer. Screenings shall not be used as a substitute for sand in concrete or mortar.

Crushed Stone or Gravel.

(47) Crushed stone or gravel shall consist of clean, hard, durable particles of stone, well graded between the limits of one-quarter (¼) and one and one-quarter (1¼) inch, with the diametrical axes as nearly as possible the same length, with all dust and all particles less than one-quarter (¼) inch removed. It shall be free from loam, clay, organic matter, soft or micaceous pebbles or other impurities. When directed, for thin sections of concrete, a finer stone than specified above shall be used, and for very heavy sections a coarser stone may be permitted.

Water.

(48) Water for mortar, concrete, flooding trenches and for all other purposes shall be provided by and at the expense of the Contractor and shall be free from oil, acid, strong alkalies or vegetable matter.

Forms.

(49) The Contractor shall provide suitable collapsible centers or forms with smooth surfaces of ample strength and rigidly braced. The bracing shall be entirely adequate to prevent deviations from the correct lines. No center or form shall be used which is not clean and of proper shape and strength and in every way suitable. Deformed, broken, or defective centers or forms shall be removed from the work. Before placing concrete, the forms shall be coated with vaseline, form grease or other suitable substance, approved by the Engineer, to prevent adherence of concrete. All forms and form lumber once used shall be thoroughly cleaned and recoated before being used again.

All wooden forms shall be built of clean, sound No. 1 yellow pine lumber, reasonably free from knots, dressed on all sides and neatly fitted. Tongued and grooved material shall be used where required. The form surface shall be watertight, securely fastened by nails, screws or bolts to the ribs or supports.

All forms shall be thoroughly braced to keep them in exact position and alignment during the placing and setting of the concrete. All wall forms shall have their sides tied together by wires or other approved ties, as far as possible.

No centers or forms on any part of the work shall be struck without the consent of the Engineer.

The Contractor shall furnish a sufficient number of centers and forms so that the work can be prosecuted rapidly.

Mixing.

(50) The concrete shall be mixed in an approved machine of the batch type except that when relatively small quantities are to be used, resort may be had to hand mixing, but only by consent of the Engineer. Accurate measuring devices shall be used for proportioning the aggregate, cement and water. The mixing shall last at least one (1) minute and shall be thorough and continued until every particle of ballast is completely covered with mortar. The mixer shall make at least twelve (12) revolutions. The Contractor shall supply a clock or other means for determining the time of mix. When necessary to mix by hand, a water-tight platform shall be used and ingredients shall be turned together at least six times, and until they are homogeneous in appearance and color. No concrete shall be placed after its initial set has occurred, and no retempered concrete will be allowed to be used under any conditions. The mixtures shall be moderately wet, of a consistency to flow into forms and around reinforcement and not to cause a separation of fine from coarse material in transportation from the mixer to the work.

Placing of Concrete.

(51) After mixing, the concrete shall be transported rapidly to the place of deposit. It shall be carried up level along the whole length of the section under construction, and shall be so placed as to avoid rehandling within the forms. It shall be spaded or rammed into place and shall be thoroughly compacted around reinforcement, pipes, or other shapes built into the work. On both surfaces of the walls of the sprinkling filters, pump wells, and settling tank, it shall be thoroughly spaded to bring rich mortar to the face.

Smooth Surfaces.

(52) With the use of moderately wet concrete in the manner above specified, and with smooth watertight forms, satisfactory surfaces should be obtained for the interior surfaces or the sides of walls which will be exposed in the finished work. But if for any reason the surfaces have voids or are unduly rough, the walls shall be plastered with Portland cement mortar, and floated to give a satisfactory appearance, or given a wash of neat Portland cement, applied with a white-wash brush, as the Engineer may direct.

The exposed surface of the coned sumps at the bottom of the settling tanks shall be floated and trowelled or screeded to a hard finish.

The tops of all walls, except those upon which concrete, brick or stone are to be placed and exposed surfaces

of other structures shall be finished with a hard trowelled granolithic finish.

Joints and Bonding.

(53) At joints the concrete last to be laid shall be suitably dovetailed, grooved or stepped, and upon resuming operations the joining surfaces shall be thoroughly cleaned and wetted, a thick bed of bond mortar being used. Joints shall not be made except as the Engineer may direct to preserve the strength, or watertightness of the structures.

Pipe and Steps in Walls.

(54) Pipes, slants, or castings, as shown on the plans or as directed, shall be placed by the Contractor in the concrete. Special care shall be taken to place them to the proper lines and grades and to tamp thoroughly around them to prevent passage of water through the wall. Steps shall be placed before pouring concrete, as far as possible.

Hangers, pipe, pipe supports or fixtures shall be placed in the columns as shown on the plans or as ordered by the Engineer to complete the work.

Care of New Work.

(55) All exposed surfaces in finished and unfinished concrete shall be kept constantly moist by sprinkling with water at short intervals or by covering with moistened burlap or by such other means as may be approved until permanent covering is in place or until, in the opinion of the Engineer, the concrete is sufficiently hardened. No new work shall be laid during rainstorms. Freshly laid concrete shall be protected by canvas during storms to prevent the water from coming in contact with it. Sufficient canvas covering shall be provided and kept ready at hand for this purpose.

Defective Work.

(56) Should any voids or other defects be discovered in any part of the work when the forms are taken down, or otherwise, the defective work shall be removed and the space refilled with suitable material in a proper manner at the expense of the Contractor.

Placing Reinforcing Steel.

(57) The Contractor shall place such reinforcing steel in the concrete as may be ordered by the Engineer, whether shown on the plans or not. The furnishing and placing of the reinforcing steel will be paid for at the unit price specified to be paid for reinforcing steel under Item 20.

Placing Materials Furnished by the District.

(58) The Contractor shall place in the concrete, at points to be indicated by the Engineer, any materials not included in this contract, which may be necessary to complete the work. All materials thus placed will be furnished on the ground at the site of the work by the Sanitary District at its own expense, but the Contractor shall perform such extra work in accordance with the provisions of Article 8. The Contractor shall carefully inspect all materials furnished by the Sanitary District, shall reject and set aside all cracked, broken or otherwise defective pieces discovered by him, and shall notify the Engineer in writing of the same within twenty-four (24) hours after the inspection. The Contractor will be held responsible for all materials furnished by the Sanitary District, after they have passed his inspection as being sound, and until they are accepted in the completed work. Any cracked, broken, or otherwise defective pieces discovered after having been inspected by him shall be replaced at his own expense.

Concreting in Freezing Weather or at Night.

(59) No concrete shall be laid at night or in freezing weather except by permission of the Engineer, and then with special precautions, satisfactory to the Engineer, to avoid the use of materials containing frost, or covered with ice, and to provide means to prevent the concrete from freezing until it has thoroughly set. The cost of all material furnished and labor employed that may be necessary or required by the Engineer to protect against freezing, shall be at the sole expense of the Contractor without extra charge therefor.

Grounds, Holes, Etc.

(60) Where required, wooden grounds shall be set for window and door frames or other carpenter or millwork.

Where required, electrical conduits, piping and other work shall be placed in the concrete.

Watertightness of Concrete Work.

(61) The pump wells, tanks and other work holding sewage shall be constructed with as few joints as possible. Great care shall be taken where joints are necessary to make them watertight, and also at all points where pipes or castings pass through the walls or floors. When the concrete work has attained sufficient strength, all pump wells, tanks, etc., shall be filled with water. The Contractor shall repair any imperfections which cause the water to fall at a rate of more than one-half (½) inch in twenty-four (24) hours.

B. REINFORCING STEEL.

Description.

(62) The Contractor shall furnish and place in the concrete, steel bars or mesh reinforcement of the size called for on the plans, or as ordered by the Engineer, at such points as are shown or as may be required. Corrugated, twisted, or deformed bars may be used, of a form to be approved by the Engineer. Mesh reinforcement, where called for, shall be of approved type.

Placing.

(63) The Contractor shall supply all necessary wiring, supports, and labor to put the reinforcement in place, fasten it securely and keep it in place while concrete is being laid. The bars shall be cut and bent as required, and wired together at intersections as often as necessary. Adjoining bars at splices shall overlap at least forty (40) diameters, and steel rod clamps shall be provided and placed where shown on the drawings or ordered by the Engineer.

Quality.

(64) Steel for reinforcing bars to be imbedded in concrete shall be corrugated, twisted, or deformed bars of the size called for on the plans and of a form approved by the Engineer. Bars shall be free from defects and kinks, and from bends not shown on the plans. Bars shall be rolled from open hearth steel billets (not rerolled material), and shall conform in all respects to "Standard Specifications for Billet Steel Concrete Reinforcement Bars" adopted by the American Society for Testing Materials in 1911, and revised in 1912, 1913 and 1914. Deformed bars shall be of the grade therein specified as "Intermediate Grade." All tests shall be made upon the finished bars as furnished for the work under this contract, and at least one tensile and one bending test shall be made from each melt of steel from which bars are furnished for this work. All bars shall be new stock, free from rust scale or excessive rust when placed in the work. A thin coating of red rust resulting from short exposures will not be considered objectionable when bars are placed in the work, but any bars having rust scale or a thick rust coat shall be thoroughly cleaned satisfactorily to the Engineer, or shall be rejected and removed from the premises upon the order of the Engineer. All bars shall be protected from the weather after delivery at the site of the work.

Mesh reinforcement shall be of a type, grade and weight satisfactory to the Engineer and equivalent in every way to that shown on the plans.

Ordering.

(65) All reinforcing metal shall be furnished by the Contractor only by order of the Engineer, and in such length and quantities as the Engineer shall specify in such order, and the Contractor shall notify the Engineer when he desires such order given to him. The Contractor shall not be entitled to any claim for damages for delays that may result from failure to so notify the Engineer.

C. FLOOR SYSTEM FOR SPRINKLING FILTERS.

Floor.

(66) The concrete used in constructing the floor shall be Class A concrete, in which shall be embedded a steel mesh reinforcement conforming to the section noted on the plans and of a type satisfactory to the Engineer. The concrete shall be carefully placed and thoroughly floated and trowelled to a smooth hard finished surface, true to line and grades.

Manufacture of Blocks.

(67) The concrete blocks shall be cast separately from the floor, in forms of approved design, and so constructed as to produce smooth finished work. The blocks shall be made of cement mortar mixed in the proportions of one (1) part Portland cement and three (3) parts torpedo sand. In removing the forms or molds care shall be taken to prevent cracking or chipping of the blocks. Special care shall be used in making the blocks to avoid cracking or

otherwise impairing their strength. All blocks shall be allowed to cure for at least three (3) weeks, protected from sun and weather, before placing in the work.

Access shall at all times be given to the Engineer to the place where these blocks are manufactured, and the methods and tools used in the manufacture shall at all times be satisfactory to the Engineer. Sample blocks shall be furnished from time to time by and at the expense of the Contractor to be tested by the Engineer to determine whether or not they are of suitable quality.

Placing Blocks.

(68) After the concrete floor has sufficiently hardened it shall be thoroughly cleaned of any foreign material. When ordered by the Engineer, the concrete blocks shall be laid, and evenly bedded in cement mortar to obtain an even bearing. The mortar shall consist of one (1) part Portland cement to three (3) parts sand. Care shall be taken to keep all foreign matter out of the water ways.

Protection of Floor.

(69) The Contractor shall take all precautions necessary or required to protect the floor system from injury, during construction and after completion, not only from the construction operation but also from weather. All injury or damage shall be repaired by and at the expense of the Contractor. The floor system shall be left in a thoroughly clean and first-class condition at the time of the final acceptance of the completed work.

D. VENT PIPES.

Description.

(70) Vent or flushing pipes of cement mortar are to be set at the ends of the filter underdrain channels under this item as shown on the plans.

The pipes shall be made of "Stone-Duct" or other cement mortar pipe of quality satisfactory to the Engineer, and shall be made of materials and in such manner as to secure a strong, smooth, dense, well formed pipe. It shall have an internal diameter of three and one-half (3½) inches and the walls shall be not less than five-eighths (⅝) inches thick. The pipe shall be of the length shown on the plans. Not more than one joint will be allowed in any length, and this shall be of such type as to firmly unite the two ends and hold them in place.

Placing.

(71) The pipe shall be set in a true vertical position on the concrete base blocks shown on the plans and firmly bedded in cement mortar. Care shall be taken to keep the interior of the pipe free from all obstructions. The pipe shall be held in place near the top by a loop of number twelve (12) copper wire set in the concrete and twisted tightly about the pipe. Any metal used in making joints between pieces of pipe shall be given two coats of asphaltum varnish after erection.

E. CAST-IRON PIPES AND SPECIALS.

Description.

(72) Under this item the Contractor shall furnish and place all the cast-iron pipe and specials required for the ten (10) inch influent line through the pump well, and the ten (10) inch connection between the sprinkling filter and the secondary settling tanks, and otherwise, as may be necessary to complete the work. Where shown on the drawings or where directed, the pipes shall be carefully built into and supported on masonry.

All cast-iron pipe and special castings shall conform to the requirements of the most recent edition of the standard specifications of the American Water Works Association, which are hereby made a part of this contract, and are hereafter referred to as the American Water Works specifications.

The pipes and special castings shall be of such class or classes as may be shown on the drawings or specified herein. The thicknesses of the pipes and castings for the several classes shall be the same as those given in the American Water Works specifications.

All hubs shall be of ample size to receive the socket of the adjoining pipe or special and leave proper lead space. Other standard patterns than those of the American Water Works specifications may be used, provided the pipe and specials in all other respects conform to the specifications and provided also that dimension drawings of the same are submitted by the Contractor and approved in writing by the Engineer.

The flange special castings shall meet the requirements for special castings of the American Water Works specifications, insofar as they apply. All flange special castings shall be made to, and all flanges shall be drilled to dimensions furnished by the Engineer. All flanges shall be cast solid, and shall be faced accurately at right angles to the axis of the pipe. All holes for bolts or studs shall be drilled. All flanges shall be coated with white lead immediately after they have been faced and drilled.

The pipes and special castings shall be made at one foundry, unless the Engineer directs otherwise.

Laying.

(73) Suitable tools and appliances for the safe and convenient handling and laying of the pipes and special castings shall be used. Great care shall be taken to prevent the pipe coating from being damaged, particularly on the inside of the pipe and special castings. All pieces shall be carefully examined for defects, and no piece shall be laid that is known to be defective. If any defective piece should be discovered after being laid, it shall be removed and replaced with a sound one in a satisfactory manner by the Contractor at his own expense. The pipes and special castings shall be thoroughly cleaned before they are laid, shall be kept clean until they are accepted in the completed work, and when laid shall conform accurately to the lines and grades given by the Engineer. Care shall be used in removing portions of the existing ten (10) inch tile influent line and replacing with cast iron pipe as shown on the plans. Any tile, aside from those to be replaced with cast iron pipe, which are damaged in the process are to be replaced by the Contractor at his own expense.

Joints and Calkings.

(74) In joining the pipes and special castings the spigot of each piece shall be properly seated in the bell of the next adjoining piece and adjusted so as to give a uniform space for the joint, which shall be made with twisted or braided hemp packing and soft pig lead. The packing shall be thoroughly driven into the bell so that the lead after having been calked shall have a depth of two (2) inches. The melting pot shall be kept near the joint to be poured, and each joint shall be made at one pouring. Dross shall not be allowed to accumulate in the melting pot. Joints between cast iron and tile pipe shall be made with mortar as described under Sections 189 to 195, inclusive.

The joints shall be thoroughly calked by competent mechanics and in such a manner as shall secure a tight joint without overstraining the iron of the bells.

Flange Joints.

(75) All flange joints shall be firmly bolted with either stud or tap bolts of the required size, as may be directed. Gaskets of rainbow rubber, or of approved quality, shall be used in all flange joints. The bolts and nuts shall be of the best quality of American refined bar iron, with good, sound, well fitted threads, the nuts to be cold pressed.

All heads and nuts shall be hexagonal, the nuts to be trimmed and chamfered; all heads, nuts and threads shall be of U. S. standard sizes. After each joint has been made the boltheads and nuts shall be coated with two (2) heavy coats of asphaltum or other approved metal coating.

Cutting Pipes.

(76) Wherever the pipes require cutting to fit in the line, the work shall be done by a machine in a satisfactory manner, so as to leave the smooth ends at right angles to the axis of the pipe, and at the Contractor's expense.

F. WROUGHT IRON PIPE AND FITTINGS, GATE AND CHECK VALVES.

Description.

(77) The Contractor shall furnish and place all the wrought iron pipe, gate and check valves, and fittings, shown on the drawings or which may be necessary to complete the work. This includes the force mains from the sewage pumps, sewage distribution system over the sprinkling filter with gate and check valves, the pipe nipples, set in the concrete columns and used for pipe supports, and the ten (10) inch gate valve on the influent line.

Wrought Iron Pipe and Fittings.

(78) The wrought iron pipe shall be standard weight. All fittings shall

be of malleable iron, standard weight. All pipes and fittings shall have sound, well fitting threads, and all pieces which have defective threads will be rejected. The flange fittings shall be carefully faced and drilled and the Contractor shall furnish and place all bolts, nuts, washers and Rainbow gaskets or equal, for making joints. The bolts and nuts shall be of the best quality American refined bar iron, with sound, well fitting threads, the nuts to be cold pressed. All heads and nuts shall be hexagonal, the nuts to be trimmed and chamfered. All bolt-heads, nuts and threads shall be of the United States standard sizes. The one and one-half (1½) inches valved outlets on the sewage force mains shall be provided with hose threads. All wrought iron pipe, fittings and nipples shal be coated both inside and cut with an approved pipe dip, applied hot. All threads shall be thoroughly cleaned before erection.

Placing.

(79) All pipes shall be carefully placed to the proper lines and grades and shall be supported by approved hangers, or otherwise in a satisfactory manner. The four (4) inch distribution system over the filter shall be set with particular care and supported in the manner shown on the plan. The one (1) inch pipe nipples for holding the pipe supports are to be accurately set to line and grade to secure accurate alignment of the distribution pipes and permit easy placing and removal of the supporting bolts. The one (1) inch pipe nipples shall be cut off flush with the surface of the concrete. Care shall be taken to keep their interior free from concrete or other foreign substances. In general, screw fittings shall be used for connecting up the pipes, but flange fittings shall be used where shown or required to properly connect up the work. Flange or screw unions shall be used as shown, so that the pipes may be readily disconnected. Where required, the pipes shall be bent to make such curves as cannot be made with standard fittings. Screw joints shall be made tight with a paste of red lead or graphite and screwed home. Cast-iron and wrought-iron pipes shall be tapped where necessary to make connections.

Gate Valves.

(80) Gate valves shall be of the doubleseated, single disc or double disc non-rising stem type, with a circular waterway of the full diameter specified. They shall be screwed, or flanged as shown, of proper dimensions to fit the pipe furnished. Handwheels shall be provided for all valves. The bodies, domes, gates and handwheels of all four (4) and ten (10) inch valves shall be of cast iron. Bronze seats shall be inserted in both gate and body, the guides on gate and body shall be bronze lined and the stem, thrust collar, and stuffing box gland made of bronze. Bronze nuts shall be used for all bolts and studs. Valve flanges shall be accurately faced and drilled to the American standard. Gaskets, bolts and nuts as specified in Section 78 shall be used for connecting flanged valves. The one and one-half (1½) inch gate valve shall be of solid bronze. All valves shall be built for one hundred (100) pounds pressure per square inch, and shall be tested at the shop under test pressures as great as the above working pressures. A certificate shall be furnished by the Contractor from the manufacturers, stating that the above tests have been successfully withstood.

All bronze shall be of the best quality, compact and homogenous, of the mixture to produce the best results in each particular part. All workmanship shall be first-class. Cast iron shall be of best quality for the work required.

Check Valves.

(81) The four (4) inch check valves shall be of the vertical swing screwed type having cast iron bodies and bronze discs. The bodies shall be provided with bronze seat rings and hinge shall be of bronze and shall run in bronze bushings. Bronze nuts shall be used on all bolts. Valves shall be built for one hundred (100) pounds pressure per square inch and shall be shop tested to the above pressure and a certificate furnished by the Contractor from the manufacturer stating that the above tests have been made and withstood.

G. IRON CASTINGS.

Description.

(82) The Contractor shall furnish and place all the iron castings required in the sprinkling filter and pump well as specified under Item 8, comprising manhole frames, covers and other miscellaneous work.

All castings shall be of tough, close

grained gray iron, free from blowholes, shrinkage and cold shuts, and sound, smooth, clean and free from blisters and all defects.

All castings shall be made accurately to dimensions to be furnished, and shall be planed where marked or where otherwise necessary to secure perfectly flat and true surfaces. Allowance shall be made in the patterns so that the specified thickness shall not be reduced.

The top of each manhole cover shall be checkered one-eighth (⅛) of an inch deep, as shown on the drawings. Around the outside edge, the top of the cover for a width of one (1) inch shall be left plain and flush with the top of the checkering.

All castings shall be thoroughly cleaned and painted before rusting begins and before leaving the shop with two (2) coats of high grade asphaltum or any other varnish that the Engineer may direct. After the castings have been placed in a satisfactory manner, all foreign adhering substances shall be removed and the castings given one (1) additional coat of asphaltum.

No castings shall be accepted the weight of which shall be less than that due to its dimensions by more than five (5) per cent.

H. STRUCTURAL IRON.

Description.

(83) The Contractor shall furnish and place all structural iron required, including steel checker plate for pump-house flooring, structural shapes for bracing, shafting, supporting floors, pipes, motors, etc., pipe hangers and supports, ladder rungs, manhole steps, anchor bolts, bolts and other structural steel work required to complete the settling tank and appurtenances specified or shown on the plans.

Quality of Steel and Workmanship.

(84) All structural steel shapes shall be of the grade known as "Medium Steel," and all rivet steel shall be of the grade known as "Rivet Steel." The quality of all steel and workmanship shall be in accordance with the most recent Manufacturer's Standard Specifications.

Bolts and Nuts.

(85) All bolts and nuts shall be made from the best quality of American bar refined iron, with good, sound, well fitting threads, the nuts to be cold pressed, trimmed and chamfered. All boltheads, nuts and threads shall be of the United States standard sizes. Bolts shall not be used instead of rivets, unless specially permitted or so directed. When used, they shall be turned to a driving fit and the bolt holes drilled or reamed.

Framing.

(86) The sizes of the principal members will be shown on the detail drawings, but the details of the connections other than those shown or furnished will be left to the Contractor. All connections and fastenings between the different members shall be of ample strength and all details shall be in accordance with the best accepted practice, subject to the approval of the Engineer.

Placing.

(87) Care shall be taken in placing the work to have the several parts assembled accurately to the proper lines and elevations and so that all holes will correspond. No drifting will be allowed, but if the holes do not match exactly they may be reamed slightly by a taper reamer, so as to permit the rivets or bolts to be inserted. In case the eccentricity is too great for good work, or the strength of the joint is liable to be weakened by reaming, the piece will be rejected and a new and satisfactory one shall be provided by the Contractor at his own expense. The rivets shall be driven in a workmanlike manner, preferably with pneumatic or other approved machinery. All loose or poorly driven rivets shall be cut and replaced with satisfactory ones. Before ordering the steel floor plates for the pump house floor, a drawing shall be submitted showing the proposed layout for approval by the Engineer.

Painting.

(88) All metal work before leaving the rolling mill or stockyard and before being exposed to the weather shall be thoroughly cleaned from all loose black scale and rust and given two (2) coats of high grade asphaltum or other varnish that the Engineer may direct. In riveted work the surfaces coming in contact shall be painted before being riveted together, with the asphaltum or other varnish. After the steel work has been erected, all foreign adhering substances shall be removed and the steel work given two (2) additional coats of asphaltum or other approved varnish. All parts

which will not be accessible for painting in the completed work shall have two (2) coats of asphaltum varnish just before erection.

I. FILTERING MATERIAL.

Quality and Sizes.

(89) The broken stone for the sprinkling filters shall be sound, hard limestone rock, free from seams and porous spots, satisfactory in all respects to the Engineer. This limestone shall be broken to such sizes as will be retained on a screen having circular holes one (1) inch in diameter, and will pass through a screen having circular holes two (2) inches in diameter. The stone shall be from a quarry where the limestone crushes in pieces with all three diametrical axes as nearly the same length as practicable.

Pieces of one (1) to two (2) inch stone having a single dimension longer than three (3) inches shall be removed.

The bottom of the filter shall be brought to a horizontal surface with stone screened between two (2) and four (4) inches in diameter as described above, placed in a layer with minimum thickness of six (6) inches at the sides of the filter.

All stone shall be clean and free from dust, screenings, fine stone, dirt or other foreign substances, and shall be thoroughly washed before being placed in the filters. When the washed stone is shaken with clean water in a suitable vessel, the water shall remain substantially clear and clean. If necessary the stone shall be rescreened before placing in the filters.

Placing.

(90) The stone shall be placed in the filters as soon after the completion of the floor system as the Engineer may permit, in a manner to avoid injury to the floor system. The Contractor shall submit to the Engineer the method by which he proposes to handle the crushed stone, for his approval. The Contractor shall be responsible for any damage done to any, portions of the sprinkling filters or other structures in placing the stone. After the stone has been placed, dirt or other foreign material shall be prevented from entering the stone, and if for any reason any portion of the stone in the filter is found to be dirty, it shall be removed, satisfactorily cleaned and replaced by and at the expense of the Contractor.

J. NOZZLES, SPLASH CUPS AND SUPPORTS

Description.

(91) Eighteen (18) sets of nozzles, splash cups, and supports complete, are to be furnished and set, as shown on the plans and specified herein.

Saddles and Bolts.

(92) The cast iron saddles for supporting the splash cup hangers shall be of the best quality tough, close grained, gray iron, free from blowholes, cracks and other defects, shall be smooth and shall conform closely to the dimensions shown on the plans. Bearing surfaces under nuts are to be spot-faced. Holes shall be drilled one-eighth (⅛) inch larger than the bolts that are to occupy them. The U-bolts for attaching the saddles to the piping are to be of best quality American refined bar iron bent to accurately conform to the outline of the pipe fitting. Bronze nuts are to be used and nuts and threads are to be of U. S. standard sizes. Sheet lead, weighing four (4) pounds to the square foot, is to be used between the saddle and the pipe fitting to secure an even bearing.

Splash Cups and Supports.

(93) Splash cups are to be of smooth grained cast brass accurately turned to the dimensions shown. The inside of the cup and the lip are to be finished to a very smooth surface. The bottom of the cup is to be finished to a plane surface exactly perpendicular to the vertical axis of the cup. A hole is to be tapped in the bottom for a one-half (½) inch set screw.

The base plate and adjusting washer are to be of soft brass of the sizes shown on the plans. A one-half (½) inch brass thumb screw of the form shown on the plans is to be provided. Holes for the supporting rods are to be accurately spaced and drilled one-eighth (⅛) inch larger than the rods. The supporting rods are to be of three-eighths (⅜) inch brass rod threaded at one end and provided with two (2) brass hexagon nuts each. The portion immediately above the splash cup is to be flattened and bevelled as shown on the plan. This

Wooden Cover.

(105) Under this item wooden covers are to be furnished for the secondary settling tanks as shown on the plans.

All lumber is to be No. 1 sound southern yellow pine dressed all over. Sheathing is to be of one (1) by six (6) inch tongued and grooved dressed lumber. All pieces are to be of sizes shown on the plans.

The supporting framework is to be carefully fitted and firmly spiked together and accurately bevelled as shown for uniform bearing of the cover. The removable covers are to be accurately made and carefully fitted and are to be attached to the cleats with one and one-half (1½) inch wood screws, two (2) screws being allowed to each cleat for each piece of sheathing. The edge shall be carefully trimmed to a true circle. A hole shall be left in the center of the cover for the insertion of a key or wrench for operating the eight (8) inch mud valves. After completion all wood work is to be given two (2) coats of linseed oil thoroughly worked in.

Payment.

(106) The lump sum specified to be paid for the two (2) secondary settling tanks with adjacent manhole under Item 10 shall include the furnishing and placing of all concrete, cast iron pipe and specials, miscellaneous iron and steel, six (6) inch shear gates, eight (8) inch mud valves, and the wooden covers, and shall include the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified. Excavation and refill, rolled embankment, reinforcing steel and the ten (10) inch tile effluent and sludge drain lines will be paid for in addition at the unit prices specified under the respective items.

ITEM 10. SLUDGE BED.

Description.

(107) Under Item 10, the Contractor shall furnish and place all materials (except rolled embankment and reinforcing steel) for and construct complete the sludge bed, and shall remodel the sludge pump piping and do other miscellaneous work, as shown on the plans and specifications in detail under the following sections of these specifications:

Concrete and Reinforcing Steel.
Underdrains and Tile Pipe.
Filtering Material.
Shear Gates.
Dismantling Present Sludge Bed, Cutting Into Imhoff Tank, etc.
Stop Planks.
Wire Basket and Miscellaneous Metal.
Cast Iron Pipe and Specials.
Wrought Iron Pipe and Gate Valves.

Concrete and Reinforcement.

(108) The Contractor shall furnish and place the concrete required to construct the curb, manhole, and slab bottom for the sludge bed, as shown on the plans. This shall be Class A concrete, made of the materials, mixed and placed as specified in Sections 44 to 61, inclusive.

The exposed faces on all vertical walls shall be carefully smoothed and the surfaces of the manhole floor and slab shall be trowelled smooth to a hard finish. Mesh reinforcement as shown shall be placed in the slab bottom of the bed.

Underdrains and Tile Pipe.

(109) A ten (10) inch split tile underdrain lightly bedded in mortar after the bottom of the bed has been placed shall be laid down the center of the bed. The pipe shall be laid with open joints, the distance of one-half (½) inch being left between the bottom of the bell socket and the spigot end of the abutting pipe. The elbow and stack at the upper end of the drain shall be carefully placed and the former filled with concrete up to the floor level of the bed. The underdrains shall be surrounded with large gravel or clean, crushed stone, as hereinafter specified. This shall be placed carefully to prevent stoppage of the bells. The tile pipe and specials shall be of the quality and strength specified in Sections 189 to 195, inclusive.

Filtering Material, Gravel and Sand.

(110) The filtering material, comprising sand, gravel, and stone, shall be furnished and placed as herein specified.

The sand shall be clean lake or river sand, thoroughly washed, of the grade known as torpedo sand, with sizes well graded from fine to coarse. This shall contain no particles over one-quarter (¼) inch in any dimension. The size and general specifi-

cations shall be as noted in Section 46.

The gravel shall be clean lake or river gravel, thoroughly washed, of the grade known in the Chicago market as fine roofing gravel. The particles shall substantially all pass a sieve having holes 0.45 inch diameter and be retained on a sieve having ten (10) meshes per lineal inch, the major portion of the particles being between 0.30 and 0.10 inch diameter.

The coarse material in the underdrains shall be placed of a size graded between the limits of one-quarter (¼) and one and one-half (1½) inches, being either lake or river gravel or clean hard crushed limestone, with the axes of the particles as nearly as possible of the same length. This material shall be washed, clean gravel or stone, with all dust and all particles less than one-quarter (¼) inch removed. It shall be free from loam, clay, organic matter, soft or micaceous pebbles, or other impurities.

Shear Gates.

(111) The Contractor shall furnish and place in the present sludge pump pit on the sludge drain from the secondary settling tanks one (1) ten (10) inch circular shear gate with flanged end. This shall be of the kind and quality specified in Section 103, so far as the same shall apply.

Dismantling Old Sludge Bed.

(112) Under this item the concrete distributing manhole and posts, cast iron piping, and tile pipe underdrains forming part of the old sludge bed shall be removed insofar as necessary for the prosecution of the new work. The six (6) inch sludge return line from the present sludge distribution manhole shall be removed, plugged where it enters the Imhoff tank, and capped with a cast iron cap or otherwise closed in a manner satisfactory to the Engineer. Excavation will be paid for under Items 1 and 2, but all other work necessary to dismantle the sludge bed shall be considered as included in the price bid under Item 10. Cast iron and tile pipe and shear gates removed may be used in other portions of the work if in good condition and approved by the Engineer, otherwise they shall become the property of the Contractor.

Holes shall be cut through the walls of the present Imhoff tank for the reception of the four (4) inch branches from the sludge pump as shown on the plans. In cutting the holes care shall be taken to avoid shattering or otherwise damaging the adjacent concrete, and all loose material shall be removed. After the pipes are set in place, the holes are to be tightly plugged with Class A concrete. A neat smooth surface flush with the old concrete shall be left on the exposed faces of the work.

A hole shall also be cut through the west side of the sludge pump pit and baffle wall for the reception of the ten (10) inch sludge drain from the secondary settling tank. The work shall be carefully done as described above and closed with Class A concrete after the pipe is in place as shown on the plans.

Stop Planks.

(113) The Contractor shall furnish and place the wooden stop plank shown on the plan. This shall be made of two (2) inch stock of clear sound No. 1 sound southern yellow pine, dressed to one and three-quarters (1¾) inches thick, finished all over, and fastened to the cleats with two and one-half (2½) inch wood screws. It shall be well oiled with raw linseed oil.

Wire Basket in Underdrain and Miscellaneous Metal.

(114) The Contractor shall furnish and place a neat galvanized iron wire basket in the ten (10) inch riser of the collector underdrain tile of the sludge bed, at the surface of the same. This shall be made up like the galvanized iron wire baskets used in leader pipes and shall be securely wired to the tile riser. Wrought iron or mild steel supports for the four (4) inch cast iron sludge line and the ten (10) inch stock on the sludge drain shall be furnished and placed as shown on the plans.

Cast Iron Pipe.

(115) Included under this item is the furnishing and placing of the four (4) inch sludge discharge line and the ten (10) inch special and blank flange at the end of the secondary settling basin sludge drain. The material furnished and work done shall be in accordance with Sections 72 to 76, inculsive, so far as they apply.

Wrought Iron Pipe.

(116) Under this item the sludge pump piping inside the pump well shall be remodelled and four (4) inch gate valves furnished and set as shown on the plans. The materials furnished and work done shall be in accordance with Sections 77 to 78, inclusive. Gate valves shall be of the type described in Section 80. After erection all wrought iron pipe and fittings shall be given two (2) coats of asphaltum varnish.

Payment.

(117) The lump sum specified to be paid under Item 10 shall include the furnishing and placing of all concrete placed in the sludge bed and used in plugging holes, sludge bed underdrain (but not connection to the sewage pump well), filtering material, stop planks, cast iron and wrought iron pipe and fittings, gate valves and shear gates, miscellaneous metal work, and all work of dismantling the present sludge bed (except excavation) and cutting and plugging holes, and shall include all labor, tools, materials and appurtenances necessary to complete the work as specified. Excavation and refill, rolled embankment, reinforcing steel, and the tile pipe connection between the sludge bed and sewage pump well to be paid for, in addition, at the respective unit prices specified herein.

ITEM 11. PUMP HOUSE.

Description.

(118) Under Item 11 the Contractor shall furnish all the materials for and construct, complete, the brick house, over the sprinkling filter and pumping equipment, as shown on the drawings, and specified in detail under the following heads:

Brick Masonry.
Mortar.
Stone Work.
Structural Steel.
Flashings, Gutters, and Rainwater Conductors.
Roof Framing and Sheathing.
Creosoting.
Roofing.
Doors and Door Frames.
Window Frames and Sash.
Interior Finish.
Carpentry and Joinery.
Hardware.
Glazing.
Painting.
Electric Light and Power Wiring.
Ventilators.

Common Brick Work.

(119) All work so indicated on the plans or herein specified as being of hard-burned brick or common brick shall be of first quality, thoroughly hard-burned brick, straight and true and uniform in size. All hard-burned brick shall be laid in bond with the face brick, but no hard-burned or common brick shall appear in the outside face of the wall. These brick are to be laid in place with all joints and spaces in the walls filled solidly with mortar. All joints shall be uniform in width not exceeding ⅜ inch. The walls are to be built straight, true and plumb and the joints outside are to be neatly struck. All brick shall be well wet before laying. Mortar for common brick shall be as specified in Section 121.

Face Brick Work.

(120) All the face brick shall be the Continental No. 1 brick sold by the Kimball Brick Company, or equal, or as selected by the Engineer. The Contractor shall receive in the lump sum specified to be paid for the pump house and sprinkling filter house the sum of Twenty-two dollars ($22.00) per thousand for standard size face brick, delivered f. o. b. railroad cars, the C. M. & St. P. Ry., Morton Grove, Ill. The Contractor shall unload the brick and transport them to the site of the work at his own expense.

The pressed brick shall be of an even color, laid in the walls with a uniform joint not less than one-quarter (¼) or more than three-eighths (⅜) inch thick, neatly struck with fluted joints and bonded to the common brick by laying two headers and two stretchers alternately in every seventh course, by the clipping mode or other approved system of bonding.

Mortar.

(121) All mortar shall be mixed with clear fresh water in clean mortar boxes. No mortar shall be mixed on the ground or floors. The mortar for all brickwork shall be properly made of lime, cement, sand and clean water, as follows: to one (1) part of lime paste, three (3) equal parts of sand shall be added, and to six (6) parts of this mixture one (1) equal part of Portland cement shall be in-

corporated by a thorough mixing. The addition of cement to the lime mortar shall not be made until immediately before the mortar is needed for brickwork. The mortar for face brick shall be tinted as ordered. The lime used shall be furnished in hard lumps, with but little dust, and be slaked in a watertight box with a sufficient amount of clean water. The lime must be allowed to slake at least one day before it is incorporated with the sand. The sand shall be of a quality specified under Section 46. The mortar for copings and sills shall be composed of Portland cement and sand in the proportion of one (1) to three (3).

Exterior Walls Above Grade.

(122) All exterior walls above grade shall be constructed of common brick work as specified under Section 119, and faced on the outside with face brick work as specified under Section 120. All door and window frames shall be built into the exterior walls with proper anchors.

Recesses, Setting and Walling-In Work.

(123) The Contractor shall attend to the setting and walling in of wooden grounds, wall-plates, steel lintels, window and door frames, anchors, cut-out boxes, electric conduits, etc., and shall form all recesses and openings in the walls for the complete performance of other branches of work. He shall also do all mending and patching where required.

Cleaning Walls.

(124) After completion of mason work, plastering and painting, the outside of walls of the buildings shall be cleaned with a muriatic acid solution, or any other equally good, and all defective joints in the brick work are to be neatly pointed with mortar. The spaces between window and door frames and the masonry are to be pointed neatly after driving mortar in the joints to fill up the entire space solidly.

Cut Stone, Sills, Lintels, Etc.

(125) The sills of windows, doors, coping etc., as shown on the drawings, shall be of the best quality Buff Bedford limestone, free from defects, and smoothly tooled with a tooth chisel. They shall be carefully laid in cement mortar and well pointed up, so as to make the joints weatherproof. The brick over all squarehead openings in exterior walls shall be supported on angle iron lintels of ample strength.

Structural Steel.

(126) The Contractor shall furnish and place structural steel shapes for the lintels over the windows and doors as shown on the plans. All the structural steel shapes shall be of the grade known as "Medium Steel," and rivet steel shall be of the grade known as "Rivet Steel," the quality of steel and workmanship being in accordance with the most recent Manufacturers' Standard Specifications. All bolts and nuts shall be made from the best quality American bar refined iron with good, sound, well fitting threads, the nuts to be cold pressed, trimmed and chamfered. Bolts used and placed and rivets shall be turned to a driving fit and the bolt holes drilled or reamed. The steel work shall be thoroughly cleaned before erection and shall be given two coats of asphaltum or other metal varnish before being put in place.

Flashings and Conductor Pipes.

(127) All plies of the roofing felt are to be turned up against the brick walls a distance of not less than nine (9) inches after mapping the parapet walls with a heavy coat of hot pitch from roof line to bottom of stone coping.

Over this turned-up roofing felt a metal flashing extending into joints of brickwork one and one-half (1½) inches and extending down over roofing not less than six (6) inches shall be placed.

The flashing is to be placed on all of the parapet walls of building and shall be of No. 24 B. W. G. gauge Merchants' 1 X, Toncan, or equal brand galvanized sheet metal. This flashing is to be properly lapped and soldered at all joints making the roof perfectly watertight. Where the metal is let into the walls a raggle is to be cut one and one-half inches deep and after placing the flashing therein it must be cemented carefully in place with elastic cement and also secured with galvanized iron hook spikes driven into the mortar joints of brick work.

The gutters on roof are to be formed by preparing saddles over roof joists as indicated on the plans.

The rain water conductor pipes are to be four (4) inches, inside diameter,

extra heavy cast iron soil pipe, secured to walls with galvanized iron hooks about four (4) feet apart. All special fittings shall be furnished and placed, including "Holt" type No. 1, or equal, roof connections with cast iron strainers for each conductor head. All conductor pipe joints are to be caulked with oakum and molten lead perfectly watertight.

Roof Framing and Sheathing.

(128) The roof framing is to be of No. 1 sound, Southern yellow pine lumber, dressed all over, well spiked together. Suitable saddles shall be built upon the rafters to slope the roof to the conductors as shown on the plans.

The sheathing on the roof is to be No. 1 yellow pine flooring one (1) inch by six (6) inches, dressed and matched, laid with close joints, and well nailed to the rafters at every bearing.

All lumber exposed on the interior of the filter house is to be creosoted as described in Sections 129 to 131, inclusive.

All anchors, anchor plates, bolts, spikes or other iron or steel fastenings or appurtenances required to complete the roof shall be furnished and placed by the Contractor.

Creosoting Lumber.

(129) All lumber to be creosoted shall preferably be air-seasoned before treatment. If not air-seasoned, it shall be seasoned by long steaming during one (1) to five (5) hours at a pressure of not more than twenty (20) pounds per square inch, or in a hot creosote oil within safe temperature, in accordance with specifications recommended in 1915 by the American Railway Engineering Association, and shall then be subjected to a vacuum of at least twenty-four (24) inches of mercury maintained at least one-half hour. At the expiration of this period a preservative shall be admitted, as hereinafter specified, without otherwise breaking the vacuum. Green lumber and seasoned lumber shall not be treated together in the same charge.

Before any timber or lumber is creosoted it shall be surfaced to final dimensions, framed and sawed square at the ends to exact lengths as required for use in the work, as far as is practicable, in order to reduce to a minimum any necessary cutting of timber after treatment.

Creosote.

(130) The preservative to be used shall be a coal-tar creosote of the best grade commercially obtainable in accordance with the most recent specifications recommended by the American Railway Engineering Association.

The creosote used may be sampled by the Engineer. Upon request therefor, the Contractor shall furnish the Engineer with every facility for sampling the creosote and inspecting the method of treatment.

Any creosote not conforming to the specifications will be rejected and shall be promptly replaced by the Contractor at his own expense.

Method of Creosoting.

(131) The lumber shall be placed in cylinders and the temperature raised by steam in coils to from 180° to 220° Fahr. A vacuum of at least 24 inches of mercury shall be produced and maintained for at least twenty (20) and not to exceed thirty (30) minutes, at the expiration of which period the creosote shall be admitted without otherwise breaking the vacuum.

The retort shall be filled with the creosote hereinbefore specified, previously treated to 160° F., which temperature shall be maintained during treatment. At no time during the process of treatment shall the temperature in the cylinder be allowed to rise above 220° F. Pressure shall then be applied and continued until the best practicable impregnation of the timber is secured. A vacuum of twenty-four (24) inches of mercury shall be applied for fifteen (15) minutes after the pressure is removed to prevent bleeding after treatment. The amount of creosote remaining in the timber after the specified treatment shall be at least twelve (12) pounds creosote per cubic foot of timber.

All surfaces of creosoted timber, when cut after treatment, shall receive two thorough applications of creosote oil before the timber is placed in the structure, the oil to be heated to a liquid condition and applied while hot.

Roofing.

(132) On the sheathing shall be laid a roofing of the Barrett specification or equal as follows: On the board sheathing shall be laid one (1) thickness of sheathing paper or unsaturated felt weighing not less than five (5) pounds per one hundred (100) square feet, lapping the sheets at least one (1) inch. Over the entire surface shall be laid two (2) plies of specification tarred felt, lapping each sheet seventeen (17) inches over the preceding one, fastening with as many nails as are needed to hold in place until remaining felt is laid. The entire surface shall then be uniformly coated with specification pitch. Over the entire surface shall be laid three (3) plies of specification tarred felt, lapping each sheet twenty-two (22) inches over the preceding one. and mopping with specification pitch the full twenty-two (22) inches on each sheet, so that in no place shall felt touch felt. Such nailing as is necessary shall be done so that all nails will be covered by not less than two (2) plies of felt. Over the entire surface shall then be spread a uniform coating of specification pitch, into which, while hot, is embedded not less than four hundred (400) pounds of gravel or three hundred (300) pounds of slag to each one hundred (100) square feet. The gravel or slag shall be from one-quarter (¼) to five-eighths (⅝) inch in size, dry and free from dirt, organic material or other foreign material.

Not less than one hundred and fifty (150) pounds of pitch shall be used for constructing each one hundred square feet of completed roof. The pitch shall not be heated above 400 deg. Fahr.

Immediately prior to the application of the gravel or slag, the Contractor shall permit the Engineer to inspect the condition of the same by cutting a slit not less than three (3) feet long at right angles to the way the felt is laid, if the Engineer so orders. All felt and pitch delivered and used on the work shall bear the label of the manufacturer.

The Contractor shall furnish a maintenance bond from an approved surety company, in the total sum based on the unit rate of three dollars ($3.00) per hundred square feet of actual roof surface. The Contractor shall guarantee in said bond for five (5) years to maintain at his own expense the roof and flashing in a watertight condition, injury from any cause other than ordinary wear and tear of the elements excepted. For the method of flashing see Section 127.

Doors and Frames.

(133) The exterior doors shall be of the size indicated on the plans. The exterior door of the pump room shall be a No. 1 quality door with stiles of Michigan stock pine or cypress one and three-quarters (1¾) inches thick, paneled and molded. The panels shall be of Georgia pine and the upper panel shall be glazed with glass as indicated on drawings. The stiles and rails shall be mortised, tenoned and securely wedged and glued. A transom sash glazed shall be supplied as indicated on the plans. The door frame shall be rebated to the full thickness of the door, the frame being one and seven-eighths (1⅞) inches thick, of clear white pine or cypress. Brick molds shall be provided. The frame shall be set plumb and well braced, being secured to the brick work on concrete with three anchor bolts on each jamb. A satisfactory threshhold of steel three-eighths (⅜) by three and one-half (3½) inches (beveled) shall be furnished, securely fastened to the concrete floor or stone by expansion bolts.

The exterior doors of the sprinkling filter house and the interior door between the filter and the pump room shall be batten doors built up of one (1) by four (4) inch double beaded clear yellow pine ceiling nailed vertically on the outside of a batten framing, braced in both diagonal directions, built up of one and one-half (1½) inch No. 1 yellow pine stock dressed all over, of the dimensions shown on the plans. The battens, rails and diagonal bracing of the interior door shall be five and one-half (5½) inches wide.

Window Frames and Sash.

(134) All windows shall be of sizes indicated on the drawings, and shall have neat frames and sliding sash, as shown on the plans. The boxes, sills, yokes, outside head and brick mold shall be of clear white pine or cypress, as shown on the details in the plans. The parting strips and stop beads shall be of the best quality long-leaf yellow pine. Parting strips shall be secured with countersunk brass screws. Frames shall be set plumb and well

braced and each frame shall be secured to the brickwork or concrete by two heavy iron anchors in each side. All window sash shall be one and three-quarters (1¾) inches thick, of clear white pine or cypress, mortised, tenoned and pinned in a first-class manner and with meeting rails beveled. Each sash shall be divided into two lights, except where otherwise shown on drawings.

The window frames and sash shall be made in a suitable manner to operate successfully with a moist atmosphere on the inside of the building at all times.

Interior Finish.

(135) All interior finish shall be of first quality long-leaf yellow pine or cypress, free from knots or sap, thoroughly seasoned and kiln-dried. Doors and windows shall have plain casings of satisfactory pattern with mitered corners. Windows shall have plain stools and aprons. All details shall be as shown on the plans.

Hardware.

(136) All sash shall be trimmed with cast bronze sash locks and galvanized spring pin catches to hold the windows open. Each leaf of each exterior door shall be hung with three loose-pin ball-tipped, cast bronze tee hinges, with the long leg at least twelve (12) inches. Locks for exterior doors shall be extra heavy Yale type mortise looks, cast bronze, with night latch attachment, and have five tumblers. Front, strikers, bolts, knobs, and escutcheons shall be cast bronze, and each lock shall be furnished with three keys. The interior door shall be hung on two (2) 4½ by 4½ inch loose-pin ball-tipped, cast bronze butts. All hardware shall be subject to the approval of the Engineer. A solid bronze tablet of satisfactory design twenty-four (24) by thirty-six (36) inches in size and having on it in suitable neat raised letters the names of the Trustees of the Sanitary District, Contractor and Engineers, and the words, "Morton Grove Sewage Treatment Plant, of The Sanitary District of Chicago," and the date of completion, shall be furnished and installed by the Contractor at the side of the door.

Glazing.

(137) The glass in all windows shall be of first quality, ribbed wire glass, one-quarter (¼) inch thick, the Mississippi Wire Glass Co. make or equal. All windows shall have two lights in each sash except where otherwise shown, and the upper panels and transom of the exterior door shall be glazed with a single light of clear wire glass. Glass shall be secured in doors by suitable moldings. In windows it shall be bedded in putty and secured by beads. On completion of the building, all lights shall be left sound, clean and free from paint, scratches, etc.

Painting.

(138) All structural steel and other exposed iron work shall receive a coat of metallic paint at the shops. After erection, they shall be carefully cleaned and given two coats of approved asphalt varnish or graphite paint. All exterior woodwork, including door and window frames, doors and windows sashes, shall receive three (3) coats of strictly pure zinc white and white lead and linseed oil paint of color to be approved by the Engineer, containing not over fifty (50) per cent white lead, in addition to the priming coat, which priming coat shall be applied before or immediately after erection. Runners of window frames shall have two coats of best boiled linseed oil. All interior woodwork and the back and sides of all window and door frames shall be painted with three (3) coats of heavy creosote stain of Cabot make or equal, of color to be approved by the Engineer. Before painting, all woodwork shall be carefully stopped with putty and have all pitch and knots killed with a heavy coat of shellac. All zinc white paint shall be composed of strictly pure highest grade French zinc white, and pure linseed oil, equal to those supplied by the Sherwin-Williams Co. All white lead shall be strictly pure lead, equal to Carter's. The zinc white and oil is to be mixed in proper proportion with the addition of a very small amount of pure turpentine. In interior paint no white lead shall be used. Paint, oil, varnish, and other materials used in painting shall be of the best quality, and the color of all paint, as well as the brands of all materials, shall be satisfactory to the Engineer. All material used in painting or varnishing shall be delivered at the building in the original unbroken containers, bearing the manufacturer's stamp thereon, and shall be mixed under the supervision of the Engineer. All paint shall be properly stirred before

using to secure thorough incorporation of the pigments and must be well brushed out in applying to secure a first-class job. Painting and varnishing shall be performed only by skilled workmen, and care shall be taken to protect all work against dust, water or other harmful agency. After completion of the painting or varnishing work, all paint and varnish spots are to be removed from the floors, walls, glass, etc.

Electric Lighting and Power.

(139) A complete electric lighting and power system shall be furnished and installed in the buiding. Wiring shall be run in suitable loricated tubing or galvaduct neatly and securely supported and where possible placed in concrete floors or walls or otherwise concealed. All necessary outlet boxes and cabinets shall be furnished and properly placed, and the lighting wires shall be split into convenient separate circuits, as directed.

In the new pump room, the Contractor shall furnish one fifty (50) watt lamp in a "Watight" fixture, or equal, attached to the tubing or galvaduct, placed in the center of the room. He shall furnish a receptacle at the base board, into which can be plugged a portable with a fifty (50) watt lamp. He shall provide a neat waterproof portable with wire guard, handle and waterproof cord twenty-five (25) feet long. All the exposed tubing and fixtures of iron shall be painted black with at least three (3) coats of a suitable metal coating.

In the srinkling filter house the Contractor shall furnish two (2) enclosed wall fixtures of watertight construction with reflectors, each containing two (2) fifty (50) watt lamps. He shall also furnish three (3) receptacles on the walls, as indicated, into which can be plugged a portable with a fifty (50) watt lamp.

The Contractor shall furnish the wiring and connect up complete, ready to run, to the motors and starting switches of the sewage pumps furnished and installed under Item 12. This shall be carried in loricated tubbing or galvaduct, the outlets at the motors being supplied with neat condulet outlets.

The Contractor shall connect up to the existing watt meter, in the existing sludge pumphouse, and in said existing pumphouse he shall place a main cabinet of steel containing a main switch fused, with separate fused switches of ample size for the new and old power and for the lighting circuits. The Contractor shall connect up the switch of the existing sludge pump motor, through the new main switch, so that all circuits may be on one main switch.

In the new pumphouse the Contractor shall install suitable fused switches for each new pump and for the lighting circuit, enclosed in a steel cabinet. Suitable connections shall be made for the wiring to the pump motors.

The current will be 220 volts, single phase alternating current from the lines of the Public Service Company of Northern Illinois in the Village of Morton Grove.

Detail plans of arrangements with specifications of all fixtures, switches and all details shall be submitted for the approval of the Engineer. All electrical works shall conform to the requirements of the National Board of Fire Underwriters.

The Contractor shall furnish on the completion of the work two (2) extra fifty (50) watt Edison "Mazda" lamps, or equal, in addition to those required for all fixtures, and also a complete set of fuses, in duplicate.

Ventilators and Scuttles.

(140) The Contractor shall furnish and place four (4) ventilators of the Arex make or equal, built up of No. 24 gauge galvanized sheet iron, neatly formed and framed strongly together. The ventilators shall be thoroughly flashed under the roofing. A wooden curb shal be made as required. The ventilator shall be equipped with dampers, controlled by bronzed chains from the filter level.

The Contractor shall also frame and place two (2) scuttle frames and covers in the roof over the pump well house centered over the pumps. The scuttle openings shall be two (2) feet square in the clear. The scuttle covers shall be covered with No. 24 galvanized wrought iron sheet, securely fastened on. The cover shall be made with a rim to be weatherproof. Suitable heavy steel hooks and eyes shall be provided to fasten the lids down.

Steps.

(141) A concrete landing and steps shall be built to the door of the pump room as shown on the plans. Concrete

shall be Class A, furnished and placed as specified in Sections 43 to 61, inclusive. A granolithic finish one (1) inch thick composed of one (1) part of Portland cement and one (1) part of sand is to be applied to the exposed surfaces of the landing and steps before the concrete has hardened. The granolithic finish shall be troweled to a smooth, hard finish.

Payment.

(142) The lump sum specified to be paid for the filter and pump well house under Item 11 shall include the furnishing and placing of the filter and pump well house, complete, as specified, and the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 12. PUMPING MACHINERY.

Description.

(143) The Contractor shall furnish and place complete two complete pumping units, each comprising a suitable centrifugal pump, single phase motor, float control switch, and appurtenances in the dry well provided for the purpose, as shown on the plans, complete, ready to run.

The lump sum specified to be paid under Item 12 shall include the furnishing and placing of the two units, including vertical pump, motor, shafting, flexible coupling, lubricating devices, bearings (both steady and ball-bearing for thrust), float control switches, switchboard, cut-out, floor plate, shaft pipe, and necessary bolts, structural shapes, brackets, wooden blocking shims, and other material to install the pumping units, complete, ready to run. All piping, valves and concrete shall be included in the lump sum specified to be paid for Item 8.

Each unit with appurtenances shall be substantially made throughout to stand up on a 24-hour service 365 days a year, starting and stopping every five to ten minutes. The sewage to be pumped will have passed through a settling tank.

Pumps.

(144) Each pump and motor shall be of sufficient capacity to pump one hundred and twenty (120) gallons per minute of settled sewage against a static head of twenty-eight (28) feet. The Contractor shall allow at least two (2) feet additional for friction in pipe and bends.

The pumps shall be of the vertical shaft type, with single or double suctions, as may be desired, direct connected to the motor shaft by suitable flexible couplings. The pumps shall be designed to permit easy access to and easy removal of the shaft, impeller and bearings. The impeller shall be of cast-iron firmly keyed to the shafts. The shafts shall be of cold-rolled steel of ample size. The weight of the shafts and impellers shall be carried on suitable roller or ball bearings securely bolted to the cast-iron floor plates to which the feet of the motors are secured. Steady bearings shall be provided as required, spaced not over six (6) feet apart. Flanged couplings shall also be provided on the shaft, at the lower end to connect to the pump shaft, and elsewhere if required. The shafts and steady bearings are to be enclosed in pipe hangers with hand holes at bearings, which are to be bolted to the pump shells and cast-iron floor plates. The pipe hangers are to be braced as shown and midway between the pump casing and floor. The wooden blocking shall be accurately fitted to the pipes and supports and U-bolts are to be drawn up to a tight bearing. If necessary, steel shims shall be inserted between the blocking and support. The bearings shall be fitted with removable bronze or babbitt-lined boxes. It is desirable that the bearings be outside of and distinct from the stuffing boxes. Suitable provision shall be made for any unbalanced thrust, as well as for adjustment and alignment. Flanges shall be provided to connect to the piping. These shall be faced and drilled to Crane Standard drilling. Feet shall be cast on the pump shells to be secured to the concrete blocks underneath by anchor bolts. Flexible couplings of approved type shall be furnished to connect the pumps and motor shafts above the floor plate. Ample provision shall be made for continuous automatic lubrication.

Motors.

(145) The motors shall be of the open repulsion slow speed type, the General Electric Co. make or equal, to operate on two hundred and twenty (220) volt alternating current, single phase. The motor shall be of ample capacity for the work required, and shall be provided with suitable self-oiling bearings to take the weight of the moving parts and to steady them. The motors shall be guaranteed to carry the rated load continuously with a temperature rise

above the surrounding air not exceeding those specified in the most recent standardization rules of the American Institute of Electrical Engineers for the character of equipment and insulation furnished.

Tripods and Floor Plates.

(146) Neat cast-iron floor plates of rectangular shape shall be provided, with faced boxes to receive the roller or ball bearing flanges and the feet of the motor tripods. Cast-iron tripods shall be furnished to hold each motor, with feet bolted to the floor plate. Before erection all iron work shall be given one (1) coat of black asphaltum paint, and after erection all exposed iron work shall receive two (2) coats.

Float Switches.

(147) Suitable automatic float switches of the enclosed butt contact type shall be installed for the automatic operation of the motors. All floats, rods, guides, float tubes and other necessary appurtenances shall be furnished. The floats shall be of ample size, substantially built of heavy copper or other approved material, suitably connected to the controlling devices by heavy brass rods or tubes carried in suitable guides. The float tubes shall be of cast-iron, of weight Class B, American Water Works specifications, neatly and strongly supported, held in place by cast-iron or steel brackets or clamps in a manner approved by the Engineer. All float tubes and brackets shall be thoroughly painted after erection with two (2) coats of an approved asphaltum varnish.

The float regulators shall be so arranged that either motor can be set to pick up the load first. Should the water level continue to rise, the second float shall then be ready to start the second motor. The float switches shall be mounted on neat pipe stands immediately above the float tubes.

The entire apparatus shall be of substantial construction, designed to afford accurate self-starting and stopping, and installed in a manner equal to the equipment furnished by Yeomans Brothers Co. The Contractor shall submit blue prints showing the proposed layout, with details and specifications for apparatus, for the approval of the Engineer. After installation the starting floats shall be set to start the pumps at levels designated by the Engineer and each pump shall be thoroughly tested by admitting sewage to the wet well to see that starting and stopping take place at the predetermined elevations. Any adjustments necessary to secure these results are to be made by the Contractor, before acceptance of the work, and, if necessary, the tests are to be repeated until satisfactory adjustment is secured. The pumps shall be operated satisfactorily under actual service conditions for one (1) week before final acceptance.

Payment.

(148) The lump sum specified to be paid for the pumping machinery under Item 12 shall include the furnishing and placing complete, ready to run, of two (2) complete pumping units, equipped with floats, float tubes, float switches, wiring, and all appurtenances, complete, as specified, and the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 13. BUILDING AND REMODELING MISCELLANEOUS MANHOLES.

Work Included.

(149) Under Item 13 the Contractor shall furnish all materials (except reinforcing steel paid for under Item 20) and do all work (except excavation paid for under Items 1 and 2) involved in remodeling the existing inlet and outlet manholes and existing manhole B, and building the outlet regulating manhole as shown on the plans and described in detail under the following heads:

A. Remodeling existing inlet manhole.
B. Remodeling existing outlet manhole.
C. Remodeling existing manhole B.
D. Oulet regulating manhole.
E. Shut-off valves and appurtenances.
F. Ten-inch sluice gates.

Remodeling Existing Inlet Manhole.

(150) This work includes cutting out and replacing the bottom of the existing manhole, furnishing and setting the shut-off valve and appurtenances, removing the present ten (10) inch shear gate and furnishing and setting a ten (10) inch sluice gate.

Cutting Out Manhole Bottom.

(151) The bottom of the present manhole shall be cut away to the lines shown on the plans. In doing this work, great care shall be used to prevent cracking or shattering of the remaining concrete. Adequate means shall be pro-

vided to prevent any damage by settlement of the remaining portion of the manhole walls, adjacent sewer, and ten (10) inch outlet pipe. Brickwork will be permitted to a limited extent to support the manhole walls during the replacement of the bottom and may be incorporated within the structure.

Replacing Manhole Bottom.

(152) The bottom of the manhole shall be replaced to the lines and grades shown on the plans after the necessary excavation is made. All concrete is to be Class A. The work is to be done in accordance with Sections 43 to 61, inclusive, in so far as they apply. Before placing concrete against old work, the surface of the latter shall be thoroughly cleaned and coated with mortar. Great care shall be used to thoroughly ram the concrete into place under the existing manhole walls to secure a tight joint and a neat flush joint shall be made with the old work. Any excavation outside the neat lines of the concrete as shown on the plans shall be solidly filled with concrete. No filling of earth will be allowed. If necessary in the opinion of the Engineer to excavate to a greater depth than shown on the plans, concrete required to fill this additional excavation will be paid for under Item 22.

Setting Shut-Off Valve and Appurtenances.

(153) The shut-off valve shall be set as shown on the plans. The anchor bolts shall be carefully set to bring the end of the cast-iron tee in accurate alignment with the ten (10) inch outlet pipe and the axis of the outstanding leg in truly vertical position. A lead gasket weighing four (4) pounds to the square foot shall be inserted between the end of the tee and the concrete and the anchor nuts shall be tighly drawn up to make a water tight joint. The supporting rod and turn buckle at the forward end of the valve shall be carefully adjusted to support the valve in the desired position without putting any undue strain on the anchor bolts. The tee shall not be attached till the new concrete has thoroughly set. The guide angles and channels shall be attached with anchor bolts grouted into holes drilled in the concrete and care shall be used to see that they are truly vertical and that the required clearances are maintained throughout. The movable portion of the valve shall be carefully assembled in position and adjusted to the shut-off height determined by the Engineer. The operation of the valve shall be tested by closing the inlet sluice gate to the manhole and the outlet shear gates on the Imhoff tanks and filling the manhole with water till the valve seats. If necessary, the test shall be repeated till the valve is accurately adjusted. Anchor bolts and nuts shall be of quality specified in Section 85.

Removing Shear Gate and Setting Sluice Gate.

(154) The ten (10) inch shear at the manhole entrance is to be removed and a ten (10) inch sluice gate with operating mechanism installed. The gate and operating mechanism shall be accurately set and aligned. Any necessary chipping of existing concrete shall be carefully done and rough surfaces left shall be plastered with cement mortar to a smooth surface. Holes for necessary anchors and guide bolts shall be carefully drilled and bolts firmly secured in place by tighly calking lead around the bolts.

Baffle.

(155) The wooden baffle shown on the plans shall be made of two (2) inch by six (6) inch No. 1 yellow pine tongue and groove lumber dressed all over and carefully fitted. Wooden cleats of size indicated attached by wooden screws, two and one-half (2½) inches long, of heavy wire, shall be used to hold the baffle together. Two (2) screws shall be used on each cleat for each piece. The baffle shall be secured in place against flotation by wooden wedges driven inside the baffle grooves in such manner as to be easily knocked out for removing the baffle. After erection all surfaces shall be given two (2) coats of boiled linseed oil well worked in.

B. REMODELING EXISTING OUTLET MANHOLE.

Description.

(156) This work includes raising the existing manhole walls to the elevation shown and furnished and placing a standard manhole cover and frame.

Materials, Placing, Etc.

(157) All concrete is to be Class A, furnished and placed as specified in Sections 43 to 61, inclusive, in so far as they apply. The existing manhole cover is to be removed but the frame may be left in place. A key-way one (1) inch deep by three (3) inches wide is to be

chipped in the top of the existing manhole and the surface carefully cleaned and given a thick mortar coat before placing new concrete. A neat flush joint between old and new work shall be made inside the manhole. A standard cast-iron manhole cover and frame, described under Section 82, shall be furnished and placed as shown and manhole steps shall be furnished and set as indicated in the new work only. A wooden plug ten (10) inches in diameter and six (6) inches thick, slightly tapered, shall be furnished for the ten (10) inch outlet spillway.

C. REMODELING EXISTING MANHOLE B.

Description

(158) This work includes furnishing and setting a ten (10) inch sluice gate and plugging an existing eight (8) inch inlet with concrete. The sluice gate is to be of the quality specified in Section 168 and set in the manner described in Section 153 and is to be provided with an extension stem of suitable length. The existing eight (8) inch inlet designated on the plans is to be plugged with Class A concrete firmly rammed in place and carefully finished inside the manhole.

D. OUTLET REGULATING MANHOLE.

Description.

(159) This work includes building the manhole and furnishing and setting the shut-off valve and appurtenances, ten (10) inch sluice gate, and manhole cover, frame and steps.

Materials, Placing, Etc.

(160) All concrete is to be Class A, placed in accordance with Sections 43 to 61, inclusive, in so far as they apply, and the manhole is to be built to the lines and grades shown on the plans. If in the opinions of the Engineer it is necessary to excavate to greater depth than shown on the plans, the additional excavation shall be filled with concrete which will be paid for under Item 22. Care shall be taken in excavating for this manhole to avoid disturbing the existing ten (10) inch outlet pipe shown on the plans and any pipe broken in the process shall be replaced by the Contractor. Any earth disturbed underneath the pipe shall be replaced with Class B concrete. The channel across the manhole shall be lined with ten (10) inch split tile. A standard cast-iron manhole cover and frame and standard manhole steps shall be furnished and placed as shown on the plans and specified herein in Sections 82 to 88, inclusive, so far as they may apply.

Setting Shut-off Valve.

(161) The shut-off valve shall be set as shown on the plans and specified herein and shall be tested as described under Section 153.

Setting Sluice Gate.

(162) A ten (10) inch sluice gate shall be furnished and set as shown on the plans and specified in Section 154, except that all necessary anchor bolts shall be built in place when the concrete is poured.

E. SHUT-OFF VALVES AND APPURTENANCES

Description.

(163) This work includes the furnishing, fabricating and placing of two (2) shut-off valves complete as shown on the plans, together with all appurtenances shown thereon.

Castings and Anchor Bolts.

(164) The fixed portion of the valve shall be made of a standard cast-iron flanged tee with dimensions following the American standard and drilled as shown on the plans. The flanges shall be faced and bearing surfaces under nuts spot faced. The outstanding leg of the tee may be cast without the flange, as shown, or it may be made from a finished casting by cutting away the flange. In either case the outstanding edge shall be carefully machined to the form shown on the plans so that all horizontal planes passed through it shall cut concentric circles on the inside. A standard blank flange, drilled as shown, shall be bolted to the outer end of the tee and sheet lead gaskets weighing four (4) pounds to the square foot shall be used between the tee and concrete and between the tee and blank flange. The castings shall be thoroughly cleaned and given two (2) coats of asphaltum or other approved varnish before erection. An additional coat shall be applied after erection. Bolts and nuts shall be of the quality specified in Section 85. Bronze nuts shall be used for the blank flange.

Brass Works.

(165) The floats, cone, buffer clips, float connecting arms and cone supports are to be made of soft sheet brass. The

floats, cone and buffer clips are to be of number sixteen (16) B. and S. gauge; the float connecting arms and cone supports of number eight (8) B. and S. gauge. The connecting rods are to be of three-eighths (⅜) inch round brass rod threaded at one end and provided with two (2) brass hexagon nuts. The adjusting sleeves are to be cut from one (1) inch brass rod, drilled out to the size shown and tapped for one-fourth (¼) inch set screws. The set screws are to be of brass with square heads. Threads and nuts are to be of U. S. standard sizes. All parts of the floats, cone and connecting arms are to be accurately formed to the dimensions shown on the drawings. The floats are to have riveted and soldered or brazed joints and are to be absolutely watertight. A one-half (½) inch drain with tight screw cap is to be soldered to the top of each float. The connecting arms are to be riveted to the floats and to each other to form a rigid framework, and holes for the connecting rods are to be drilled to secure accurate alignment. The cone is to be formed with a butt joint riveted to a number sixteen (16) gauge splice plate on the under side and soldered. Care shall be taken in forming it so that it shall seat properly at all points against the valve seat. All rivets under the gasket are to be countersunk or flattened to leave no projections. The cone is to be riveted to the supporting bars underneath. The upper buffer clips are to be riveted to the cone; the lower ones are to be attached with one-fourth (¼) inch brass bolts.

Miscellaneous.

(166) A canvas insertion rubber buffer of the dimensions shown is to be attached to the cone. This buffer is to be so formed as to lay flat against the surface of the cone and seat against the tee forming a substantially watertight joint. The ends are to be carefully joined.

A connecting rod (and anchorage) of American refined bar iron, provided with a turnbuckle of approved type, is to be provided and placed as shown on the plans. It is to be coated with asphaltum after final adjustment is made.

Float guides of structural shapes are to be provided as shown on the plans and are to be properly attached with anchor bolts and coated with two coats asphaltum varnish after placing.

Float stops for each valve consisting of sufficient length of Stebbins Hardware Co. No. 62 bronze link chain or equal, adjustable clamps of approved design, and chain supports set in the concrete as shown on the plans are to be provided.

F. TEN-INCH SLUICE GATES.

Description.

(167) Ten (10) inch circular sluice gates are to be provided for the present inlet manhole, the outlet regulating manhole and existing manhole B.

Materials and Manufacture.

(168) The sluice gates shall be of approved standard manufacture and of the circular non-rising stem type, having the thrust collar supported by the gate frame. The gate frame, guides and plug shall be of best quality of cast iron. Bronze seats shall be inserted in both frame and plug and satisfactory bronze wedges provided for forcing the gate to its seat when closed. The guides on the gate shall be bronze lined, stem and thrust collar shall be of bronze, and all bolts shall have bronze nuts. The gates shall have flanged ends to bolt directly to the concrete, drilled for twelve (12) three-quarter (¾) inch bolts on a fourteen and one-quarter (14¼) inch bolt circle. The stems shall be finished with a square nut to receive the extension stem. The gates shall be tight under a maximum head of eight (8) feet with the pressure tending to push the plug away from the seat.

Operating Mechanism.

(169) Extension stems of cold rolled steel properly connected to the gate stems shall be provided as shown on the plans. For the inlet manhole a set of cast-iron mitre gears with machine cut teeth properly keyed to the extension stems is required, and a handwheel of standard size with locknut is to be provided. For the outlet manhole and existing manhole B a square stem nut is to be left and a suitable wrench provided for operating the gate. Anchor bolts and stem guides of American refined bar iron are to be provided and accurately set as required. Those for the inlet manhole and existing manhole B are to be set in holes drilled in the concrete and grouted in place; those in the outlet regulating manhole are to be set in place when the concrete is poured. Special care shall be taken to secure accurate alignment of the gate stems and mitre gears for operating the valve in

the inlet manhole. Bronze hexagon nuts shall be used for attaching the gates and a lead gasket weighing four (4) pounds to the square foot shall be used for securing a watertight joint between the gate frame and concrete. After erection all parts except those of bronze and which are in rubbing contact shall be given two (2) coats of asphaltum varnish.

Payment.

(170) The lump sum specified to be paid for building and remodeling miscellaneous manholes under Item 13 shall include the furnishing and placing of all materials and appurtenances, complete, as specified, and the furnishing of all labor, tools, material and appurtenances necessary to complete the work as specified.

ITEM 14. WIRE FENCING.

Description.

(171) The Contractor shall furnish and place under Item 14 neat steel wire fencing and steel fence posts around the sedimentation plant as shown on the plans, or as ordered in writing by the Engineer, other than the fencing taken up and replaced as specified under Item 15.

Wire Fencing.

(172) The wire fencing shall be heavy galvanized lawn fencing, with four (4) inch mesh, the American Steel & Wire Co. make or equal, fifty-eight (58) inches wide, built up of two (2) strand No. 12½ cables with No. 12½ cross wires.

Posts and Placing.

(173) The wire fencing shall be tightly stretched between and suitably supported on galvanized steel fence posts of the American Steel & Wire Co. make or equal. All line posts shall be No. 13 gauge, neatly capped, spaced not over eight (8) feet on centers. All corners or end posts, as well as special line posts shown on the plans, shall be No. 10 gauge, strongly braced with galvanized iron braces either cornerwise or along the line. The line posts shall be set to a depth of at least two and one-half (2½) feet in the ground, and the corner, end or special line posts shall be set as deep and bedded in a block of concrete at least one (1) foot square. All braces shall also be suitably anchored. All concrete ordered by the Engineer for this purpose will be paid for at the unit price specified to be paid per cubic yard under Item 22. Care shall be taken to have good alignment throughout. All necessary fittings, braces, posts, caps and other appurtenances shall be furnished to make a complete fence, secure and strong.

Gate.

(174) A gate shall be furnished and placed at a point shown on the plans or directed by the Engineer, to match the wire fencing, built up on a pipe frame, all galvanized, of the American Steel & Wire Co. make or equal. The gate shall be of the "double drive" pattern, fifty-eight (58) inches high, with a width of opening ten (10) feet. It shall be hung on neat hinges secured to steel posts and furnished with a catch and padlock hasp, provided with a stout Yale lock or equal and four (4) keys.

Measurement.

(175) The wire fencing will be measured on the basis of the actual lineal feet of fencing built as ordered, no additional allowance being made for gate, end, corner and line posts. No. measurement will be given under this item for existing fencing taken up and replaced.

Payment.

(176) The unit price specified to be paid per lineal foot for wire fencing under Item 14 shall include furnishing and placing of the fencing, posts, braces, gate and all material, as specified, and shall include the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 15. REPLACING FENCES.

Description.

(177) Under Item 15, the Contractor shall take up and replace, either in the old position or elsewhere, the present steel wire fencing and steel fence posts (around the sedimentation plant and tank), as shown on the plans or as ordered by the Engineer.

The Contractor shall take up the old fence with as much care as possible, and replace as ordered by the Engineer in accordance with the specifications in Section 173, so far as they may apply. Only new fittings, bolts, caps, posts or other appurtenances required shall be furnished by the Contractor at his expense to complete the setting of the fence in a secure manner.

Measurement.

(178) The wire fencing replaced will be measured on the basis of the actual lineal feet of fencing replaced as ordered, no additional allowance being made for gate, end, corner and line posts. No measurements will be given under this item for building new fencing under Item 19.

Payment.

(179) The unit price specified to be paid per lineal foot for replacing fencing under Item 15 shall include the taking up and replacing of the existing wire fencing when and where ordered by the Engineer, and shall include the moving and placing of the fencing, posts, braces, gate and all material, as specified, and shall include the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 16. REMOVAL OF BRIDGE ABUTMENT.

Description.

(180) The Village of Morton Grove will remove the old existing steel truss highway bridge, crossing the north branch of the Chicago river at the north end of the property of the Sanitary District. The Contractor shall remove the easterly abutment.

The stone abutment shall be torn down and removed. Care shall be taken to salvage undamaged as much material as possible. Salvaged stone shall be used for paving slopes of the embankment as directed by the Engineer, and no further payment will be made therefor other than the unit price specified per square foot for slope paving under Item 17.

The stone abutment shall be stripped down to the earth footing, or at least to elevation twenty-eight (28) C. C. D. All debris caused by work under this item shall be removed from the river.

The lump sum specified to be paid under this item shall include all the work required to wreck and salvage the abutment. No additional payment will be made at the unit price specified under Items 1 or 2 for work done under this item. The removal of the old embankment behind the east abutment will, however, be paid for at the unit price specified per cubic yard for excavation under Item 1.

Payment.

(181) The lump sum specified to be paid for the removal of bridge abutment under Item 16 shall include the wrecking and salving of the east abutment, complete, as specified, and the furnishing of all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 17. SLOPE PAVING.

Description.

(182) Under Item 17, stone removed from the bridge abutment under Item 16 shall be used for paving slopes so far as suitable and as ordered by the Engineer. Additional paving stone required, if and as ordered by the Engineer, will be furnished to the Contractor, f. o. b. cars, Morton Grove, Ill., by the Sanitary District.

Placing.

(183) Stone may be laid directly on the slope or on a layer of crushed stone to be paid for under Item 6 as directed by the Engineer, with the flat side up, and shall be firmly bedded and placed as closely together as possible. The largest and heaviest stones shall be placed along the bottom of the slope to form a firm footing for the remainder of the paving. A minimum thickness of eight (8) inches shall be maintained and no pieces with their least dimension less than this shall be used except for fillers, and when completed the paving shall present a uniformly smooth surface.

Payment.

(184) The unit price per square foot specified to be paid under Item 17 shall be for the paving measured in place and shall include all tools, materials (except crushed stone), labor and appurtenances required for performing the work as specified.

ITEM 18. COVER FOR IMHOFF TANKS.

Description.

(185) Under this item are included the furnishing and placing of wooden covers and cutting notches in the outlet troughs for the present Imhoff tanks.

Material.

(186) All lumber is to be No. 1 yellow pine dressed all over and of the dimensions shown on the plan. Sheathing is to be tongue and groove lumber. Hardware is to be of best quality and hinges and lifting rings are to be galvanized.

Fabrication.

(187) The framing for the tank covers is to be accurately fitted and thoroughly spiked together to form a rigid frame work as shown on the plans. The stringers are to be carefully beveled as shown. Sheathing is to be nailed in position, and lap and ridge boards, trap doors and framing, and drainage gutters, shall be neatly and accurately fitted. Drainage holes are to be bored as shown. Trap doors are to be cleated with wood screws of proper size. After fabrication all surfaces are to be treated with two (2) coats of linseed oil. If not fabricated in position the covers shall be placed over the tanks and any defects in fitting corrected before acceptance.

The wooden outlet troughs in the present tanks are to be notched as shown on the plans. This work is to be carefully and accurately done.

Payment.

(188) The lump sum specified to be paid under Item 18 shall include furnishing and placing of all materials complete to build the cover and cut the notches as shown and shall include all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 19. VITRIFIED TILE PIPE AND SPECIALS.

Description.

(189) Under Item 19 shall be furnished and placed all the vitrified tile sewer pipe and specials shown on the plans and specified as included under this item. This includes the ten (10) inch tile pipes forming the sludge drain from the secondary settling tanks to the sluge pump pit, the effluent drain from the sludge bed to the sewage pump well, and the effluent line from the secondary settling tanks to the outlet regulating manhole.

The Contractor shall furnish and lay the vitrified sewer pipe with such bends, branches, or other specials as may be necessary to complete the work as specified.

Quality.

(190) All sewer pipe shall be of standard quality, made of the best material, thoroughly and perfectly burned, of homogeneous texture, without cracks or imperfections, well glazed, so that their inner and outer surfaces shall be smooth, hard, and even.

Dimensions.

(191) The pipes shall be at least two (2) feet in length. Shorter or cut lengths shall be used where necessary to make closures. Branches, bends, and other specials, where so shown or required, shall be made to dimensions furnished by the Engineer. All pipes shall be straight, true in form, of full diameter throughout, and shall have socket joints. The thickness of the pipe and the dimensions of the socket shall be at least equal to those of single strength deep and wide socket, standard sewer pipe of the same diameter.

Laying.

(192)) All pipes before being laid, or lowered into the trench, shall be fitted together dry and matched so that when laid or joined in the trench they shall form a smooth and true line. All pipes shall be laid to the lines and grades given by the Engineer. The ends or shoulders of each pipe shall abut against the next adjacent pipes in such a manner that there will be no unevenness of any kind along the bottom half of the pipes.

Joints.

(193) The space between the pipe and socket shall be as uniform as possible, and shall be made watertight by first using a small jute gasket thoroughly saturated with neat Portland cement carefully coiled and placed in the bell of the pipe. The joints shall then be thoroughly filled with Portland cement mortar, made of equal volumes of cement and clean, sharp screened sand, thoroughly mixed dry, the cement and sand to be of the quality specified in Sections 45 and 46, water enough afterwards being added in small quantities to give it the proper consistency. It shall be used as soon as made. The mortar shall be solidly rammed into the joints, after which the joints shall be carefully wiped inside and out. Joints between cast-iron and tile pipe shall also be made in the above manner.

Interior of Pipe.

(194) The interior of the pipe shall be carefully freed from all dirt, cement or superfluous materials of every description as the work proceeds, for

which purpose a disc mold or swab filling the entire bore of the pipe, and attached to a rod sufficiently long to pass two (2) joints from the end of the pipe last laid shall be continuously worked through as the laying of pipe proceeds. In all cases, the open ends of pipes and branches shall be temporarily and securely closed with carefully fitted boards or stoppers to prevent any earth or other substance from entering. The Contractor shall make good all defects and remove any foreign matter which may haven been left or otherwise introduced into the pipe before the final acceptance of the work.

Future Inlets and Lampholes.

(195) At points for future connections the bell end of the tile shall be blanked off with brick or a thin concrete slab, cast outside and seasoned. The blanks shall fit neatly in the open bell of the pipe and shall be made tight with a suitable asphalt or composition joint filler applied hot. The cost of making such joints, cutting and placing the brick or castings, and placing a concrete slab shall be included in the price specified to be paid under items wherein specified.

Payment.

(196) The unit price specified to be paid per lineal foot under Item 18 shall include furnishing and laying the ten (10) inch tile pipe and specials and shall include all labor, tools, materials and appurtenances necessary to perform this work as specified. Excavation and refill and concrete backing, if required, will be paid for under the respective items of the contract.

ITEM 20. REINFORCING STEEL.

Description.

(197) The Contractor shall furnish and place in the concrete specified under Items 8, 9, 10 and 13, steel bars and mesh for reinforcement of the sizes called for on the plans or as ordered by the Engineer, at such points as are shown or as may be required. Corrugated, twisted or deformed bars may be used, of a form to be approved by the Engineer. Mesh reinforcement ordered shall be approved by the Engineer.

All material shall be furnished and placed as specified in Sections 62 to 65, inclusive.

Payment.

(198) The unit price specified to be paid per pound under Item 20 shall include all labor, tools, materials and appurtenances necessary to furnish and place all reinforcing steel. The weight paid for shall be scale weight for all steel actually placed in the work, no allowance being made, however, for wire, ties, slips or other devices used to tie pieces together for support during construction.

ITEM 21. ADDITIONAL CONCRETE, CLASS A.

Description.

(199) Under this item the Contractor shall furnish and place any additional concrete, or proportion of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel or broken stone, which is not included for payment under Items 8, 9, 10 and 13.

The general specification for concrete given in Sections 43 to 61, inclusive, shall apply to all work in this item.

Measurement.

(200) The amount of additional concrete placed will be measured by the lines and grades actually given by the Engineer.

Payment.

(201) For all additional concrete, Class A, put in place by order of the Engineer in writing, the sum of Ten Dollars ($10.00) per cubic yard will be paid, which sum is agreed by the Contractor to be full compensation for all labor, materials, tools, and appurtenances necessary to complete the work as specified.

ITEM 22. ADDITIONAL CONCRETE, CLASS B.

Description.

(202) Under this item the Contractor shall furnish and place any additional concrete required in the proportion of one (1) part Portland cement, two and one-half (2½) parts sand and five (5) parts gravel or broken stone, which is not included for payment under Items 8, 9, 10 and 13. The general specifications for concrete given in Sections 43 to 61, inclusive, shall apply to all work given in this item.

Measurement.

(203) The amount of additional concrete placed will be measured by

the lines and grades actually given by the Engineer.

Payment.

(204) For all additional concrete, Class B, put in place by order of the Engineer in writing, the sum of Nine Dollars ($9.00) per cubic yard will be paid, which sum is agreed by the Contractor to be full compensation for all labor, materials, tools and appurtenances necessary to complete the work as specified

ITEM 23. TIMBERING LEFT IN PLACE.

Description.

(205) The Contractor shall leave in place such timbering, sheeting and shoring as the Engineer may order in writing, cut off as directed, as specified herein.

Payment.

(206) For all lumber used for timbering, sheeting and shoring which is left in place by order of the Engineer, the unit price of Thirty Dollars ($30.00) per thousand feet, board measure, will be paid, which sum is agreed by the Contractor to be in full compensation for all labor, tools, materials and appurtenances necessary to complete the work as specified.

ITEM 24. ADDITIONAL LABOR.

Description.

(207) If the splash cup tests described in Section 93 do not show a uniformity of distribution satisfactory to the Engineer, adjustment of the distribution piping and splash plates by changing their elevation, with additional distribution tests as described under Section 96 may be required by the Engineer under this item. Suitable devices and tools for raising or lowering the distribution piping shall be provided by the Contractor, so that the work may be done without injury to the work. Any damage caused by the Contractor's operations shall be made good at his own expense. If additional pipe or fittings are required for doing the work, the same will be provided by the Sanitary District of Chicago, but all other materials shall be furnished by the Contractor. After adjusting the piping and splash plates to the new grades established by the Engineer, an additional distribution test or tests, as described under Section 96 shall be run.

Payment.

(208) The unit price to be paid per man-hour under Item 24 shall include the actual number of man-hours of labor, exclusive of superintendence, office, and overhead expense, actually employed in any adjustments to the distribution system and in the performance of any tests after the work has been originally completed and tested as specified under Sections 91 to 96, inclusive. The price to be paid shall include all labor, materials (except pipe and fittings), tools and appurtenances necessary to complete the work as specified.

GENERAL CONDITIONS.

Sanitary District Law.

hereby agrees to carry on all the work

Article 1. The said Contractor provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers," approved May 29th, 1889, in force July 1st, 1889, and all acts amendatory thereof and supplementary thereto.

Village Ordinances.

Art. 2. The said Contractor agrees to carry on all work provided for in this contract in strict conformity with the ordinances and rules passed by the Village of Morton Grove, covering the construction of said work, and to conform to all other regulations or ordinances of said village.

Omission on Plans.

Art. 3. The plans furnished form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or drawings.

Approximate Quantities.

Art. 4. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which

have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the plans herein mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Examination of Site.

Art. 5. All bidders for the work under this contract are required before submitting proposals to examine the site of the work and adjacent premises, and the various means of approach to the site, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing the construction plant and other equipment and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Field Office.

Art. 6. The Contractor will be permitted to establish and maintain, at his own expense, during the life of this contract, an office upon the station grounds. This office shall, however, be located and constructed as approved by the Engineer. The disposal of tools, material, machinery, and other supplies and appurtenances during storage and erection on the property of the Sanitary District shall be subject to the approval of the Engineer The Contractor shall assume all responsibility for the security of everything he may have in said office, or on the property of the Sanitary District.

Changes in Plans.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

If such alterations increase the amount of work to be done, where lump sum prices are specified, such increase shall be paid for as an extra as provided in Articles 8 and 9. If such alterations or omissions diminish the amount of work to be done, where lump sum prices are specified, such alterations or omissions shall not constitute a claim for damages or for loss of profits on the work that may

be dispensed with, and the Sanitary District shall not be required to pay for work or material omitted. The Contractor shall allow a credit for all such work or material omitted, the amount of the credit to be fixed by the Chief Engineer on the basis of the estimated cost of the labor and materials omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer may order in writing, provided, however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this agreement, and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed herein before and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same as shown by the pay rolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Chief Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents.

All inspection of any and all material furnished for use in the work shall be made at the site of the work after delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay the Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the extra time expended in performing any such inspection at such other points.

All equipment and materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work, and to all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

If any defects or omissions in said work are hidden or concealed, so that a reasonably careful inspection at the time of acceptance of said work would not have disclosed them, and such defects or omissions appear or are disclosed within one (1) year after the final acceptance of said work, then said Contractor agrees, on notice given him in writing by the Chief Engineer that such defects or omissions exist, to immediately correct and make good the same, and in the event that he fails, refuses or neglects so to do, then said Sanitary District may correct and make good the same and said Contractor hereby agrees to pay on demand the cost and expense of doing such work.

The Contractor shall be guided by the lines, stakes, marks and grades given by the Engineer and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Cost of Work.

Art. 12. All books and accounts kept by the Contractor in connection with this contract shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, the cost of repairs to machinery, and other information required by the Engineer. The Contractor shall, on request, furnish the Engineer with copies of expense bills for transportation charges

on all machinery, material and supplies shipped to or from the work under this contract.

Plant.

Art. 13. The Contractor shall furnish all material and supplies, plant, staging and falsework, tools and implements, teams, cars and tracks; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer, all necessary barricades, and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish watchmen. The cost of all the above shall be covered by the amounts paid at the lump sum or unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 14. Whenever the Contractor shall be permitted or directed to perform work at night, or on Sundays or a holiday, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 15. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, staging, falsework, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 16. The Contractor shall take whatever precaution that may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work.

The Contractor will be required to conduct his work so as not to obstruct or render dangerous public highways, bridges or ditches.

Superintendence.

Art. 17. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer, who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and plans and the orders of the Engineer thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer.

Workmen.

Art. 18. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 19. In accordance with the rules and regulations for the guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employes such regulations in regard to cleanliness and the disposal of garbage and wastes, as shall conduce to their health, and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall take such means as the Engineer may direct to effectualy prevent the creation of a nuisance on any part of the property of said Sanitary District, streets, or adjacent property. Necessary sanitary conveniences for the use of the laborers on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 20. It is further agreed that the Contractor shall indemnify, keep and

save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 21. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same or by or on account of any omission or act of said Contractor, his agents or employes; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 22. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this state;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10, 1911, in force May 1, 1912;" approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 23. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign by power of attorney or otherwise any portion of the money that may become due through the performance of any of this contract.

Subletting Work.

Art. 24. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not, in the opinion of the Engineer,

competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same, and the decision of the Engineer as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the Sanitary District or by said Engineer, shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work at each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties, to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or his duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, under the written order of the Engineer, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided, shall after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 25. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies or any sort or kind used or consumed in, upon, or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time.

Art. 26. The Contractor agrees to begin the work covered by this contract within thirty (30) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor, and to prosecute the same with all due diligence and to entirely complete the work on or before December 31, 1919.

It is understood and agreed that Time is of the essence of this contract, and that a failure on the part of said Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 27. It is therefore covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work herein specified on or before the date hereinbefore fixed for completion, the said Contractor shall and will pay the said Sanitary District the sum of Ten Dollars ($10.00) for each and every day the Contractor shall be in default in the time of completion of this contract.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the

liquidated damages which said Sanitary District will suffer by reason of such defaults, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the said work, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto. It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for delays.

Extensions or Additions.

Art. 28. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provisions of this contract with reference to Liquidated Damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 29. The Contractor shall delay, or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, providing that in the event of such delay or delays or of such suspension or suspensions of the progress of the work or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 30. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay on the part of railroads in furnishing cars or transporting said equipment, material or appurtenances for said work, or by War Boards or Councils of the Federal Government or State Councils of Defense, or by Federal administrators, or by delays in obtaining priority certificates from the United States government if such are required, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default or delay of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article (Art. 30), in the opinion of the Chief Engineer are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify verbally the Engineer in direct charge in the field, and unless the Contractor notify the Chief Engineer in writing before the fifth of each succeeding month of all delays occurring in the preceding month.

It is further expressly agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article (Art. 30) except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. The Chief

Engineer shall decide the number of days that said Contractor has been so delayed and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 31. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character and in the time herein specified; or if said Contractor shall fail financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by said Contractor; or if the Contractor shall lose control of said work for any cause whatsoever except by the act of God, the United States Government or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer; or if, in the opinion of the Engineer, the Contractor refuses or neglects to use measures to protect the said work from damage; or if, in the opinion of the Engineer, the Contractor is guilty of carelessness or incompetency in the execution of said work; or if, in the opinion of the Engineer, the said work has been or is being delayed by the Contractor; or if, in the opinion of the Engineer, the rate of progress is not such as to insure the completion of the work within the time specified; or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed; or that the Contractor is wilfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Sanitary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or any part thereof, as may be designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in this article specified, the said Sanitary District shall have a lien upon all the equipment, material, supplies, machinery, implements and tools of the Contractor then existing on the premises of said Sanitary District for the purposes hereinafter specified; and the said Sanitary District may thereupon immediately take possession of all said equipment, materials, supplies, machinery, implements and tools for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract, and in completing the said work by contract the Sanitary District may use such equipment, materials, supplies, machinery, implements, tools and plant, as above specified, as may be the property of said Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other contractors if all or any part of said work is completed by contract, and any sum or sums of money paid by the Sanitary District in hiring men and teams, machinery, implements, tools and plant, and any sum or sums of money paid by the Sanitary District for the purchase of equipment, materials, supplies, machinery, implements, tools, and plant, and the cost of repairs or replacements thereto; and all cost, of repairs and replacements upon machinery, implements, tools and plant, of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance, and as compensation for accidental injuries or death suffered by employes in the course of their employment in the performance of said work under the Employers' Liability Act of the State of Illinois, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the said Sanitary District out of any moneys that may be due or may at any time thereafter become due to the said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid, then the Sanitary District may sell all materials, supplies, machin-

ery, implements, tools and plant then on hand, whether obtained from the Contractor or by purchase, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of the said property at such sale shall be credited to the Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and his bondsmen shall be liable to pay the amount of said deficiency; and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 32. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient securities, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the securities on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such securities thereon as shall be satisfactory to the Board of Trustes of said Sanitary District.

Progress.

Art. 33. The Contractor hereby agrees that the progress of the work under this contract shall be such that, on the respective dates shown in the following tabulation, the total amount of work completed (expressed in percentage, in value, of the whole of said work) will be not less than that shown in said tabulation:

Tabulation Showing Total Amount of Work (expressed in percentage, in value, of the whole of said work), to Be Completed on Dates Shown:

Year	Date	Per Cent Completed
1919	September 1	10
	October 1	40
	November 1	75
	December 31	100

The assumed value of the whole of said work shall be based on the approximate quantities of work set forth in the proposal of the Contractor hereto attached, at the unit prices herein specified.

If the rate of progress be such that the total amount of work accomplished by the Contractor on any date mentioned in the foregoing tabulation is less than the amount therein specified to be completed on such date, then the Sanitary District may withhold the monthly payments herein specified, until such time as the total amount of work performed by the Contractor shall equal the requirements of the work to be performed as hereinabove specified.

Prices.

Art. 34. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the labor, tools, materals and appurtenances necessary to complete the work specified, and for doing all the work contemplated and specified in this contract, also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work, and the whole thereof, in full compliance with the plans and specifications, and the requirements of the Engineer under them, to-wit:

(1) For earth excavation, including the disposal of excavated material, as specified, the sum of one dollar sixty-five cents ($1.65) per cubic yard.

(2) For rock excavation, including the disposal of excavated material, as specified, the sum of three dollars ($3.00) per cubic yard.

(3) For rolled embankment, complete, in place, as specified the sum of seventy-five cents ($0.75) per cubic yard.

(4) For the loam, complete, in place, as specified, the sum of two dollars and fifty cents ($2.50) per cubic yard.

(5) For sand fill, complete, in place, as specified, the sum of three dollars ($3.00) per cubic yard.

(6) For roadways and walks, complete, in place, as specified, the sum of four dollars ($4.00) per cubic yard.

(8) For the sprinkling filter and pump well with appurtenances, complete, as specified, the lump sum of

thirteen thousand six hundred fourteen dollars ($13,614.00).

(9) For the two secondary settling tanks with appurtenances, complete, as specified, the lump sum of twenty-three hundred thirty-nine dollars ($2,339.00).

(10) For the sludge bed with appurtenances, complete, as specified, the lump sum of fifteen hundred dollars ($1,500.00).

(11) For the filter and pump well house and appurtenances, as specified, the lump sum of sixty-two hundred sixty-three dollars ($6,263.00).

(12) For the pumping machinery and appurtenances, complete, in place, as specified, the lump sum of twenty-two hundred dollars ($2,200.00).

(13) For building and remodeling miscellaneous manholes, complete, as specified, the lump sum of sixteen hundred ten dollars ($1,610.00).

(14) For wire fencing, in place, as specified, the sum of one dollar and fifty cents ($1.50) per lineal foot.

(15) For removing and replacing wire fencing, complete, in place, as specified, the sum of fifty cents ($0.50) per lineal foot.

(16) for removal of the east abutment of the old bridge across the north branch of the Chicago river, complete, as specified, the lump sum of one hundred dollars ($100.00).

(17) For slope paving, complete, in place, as specified, the sum of forty cents ($0.40) per square foot.

(18) For covers for Imhoff tanks, in place, complete, as specified, the lump sum of two hundred eighty dollars ($280.00).

(19) For laying ten (10) inch vitrified tile pipe, in place, as specified, the sum of one dollar and seventy-five cents ($1.75) per lineal foot.

(20) For reinforcing steel, in place, as specified, the sum of five cents ($0.05) per pound.

(21) For additional concrete, Class A, complete, in place, as specified, when ordered in writing by the Engineer, the sum of ten dollars ($10.00) per cubic yard.

(22) For additional concrete, Class B, complete, in place, as specified, when ordered in writing by the Engineer, the sum of nine dollars ($9.00) per cubic yard.

(23) For shoring and timbering left in place by order of the Engineer, as specified, the sum of thirty dollars ($30.00) per thousand feet, board measure.

(24) For furnishing additional labor, as specified, the sum of one dollar and twenty-five cents ($1.25) per man-hour.

The foregoing prices shall cover the cost of all plant and tools and of all work and material of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents, and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made, the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 35. The said Sanitary District agrees to pay said Contractor the sums herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 36. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials, except in the manner set forth in this agreement, nor until all the stipulations, provisions, and conditions hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will,

at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay the said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the successors, heirs, legal representatives, administrators and executers of said Contractor.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of the Committee on Finance of its Board of Trustees, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President and to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Committee on Finance.
L. F. King,
Clerk.
Ready and Callaghan Coal Co.
By Michael Ready,
President.
(Seal)

Attest:
Walter M. Ready,
Secretary.

Approved:
F. L. Barrett,
Architect.
Langdon Pearse,
Sanitary Engineer.
G. M. Wisner,
Chief Engineer.
Charles E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, Ready & Callaghan Coal Co. as principal and Southern Surety Company as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of eighteen thousand seven hundred sixty-nine dollars and eighty-eight cents ($18,769.88) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 17th day of July A. D. 1919.

The Condition of the Above Obligation Is Such, That whereas the above bounden Ready & Callaghan Coal Co. has entered into a certain contract with The Sanitary District of Chicago, bearing date the 17th day of July, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for the Construction of a Sprinkling Filter and Appurtenances in the Village of Morton Grove, Township of Niles, County of Cook, State of Illinois, as specified in the foregoing contract.

Now, If the said Ready & Callaghan Coal Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses, and attorney's fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in anywise result from the carelessness or neglect of said Ready & Callaghan Coal Co., its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including repayment of overpayments and including also all valid claims and demands for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illi-

nois, entitled, "An Act to promote the general welfare of the people of this state by providing compensation for accidental injuries or deaths suffered in the course of employment within this state; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, 'An Act to promote the general welfare of the people of this state by providing compensation for accidental injuries or deaths suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Ready & Callaghan Coal Co. in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, and made a condition hereof, that any judgment, rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said Ready & Callaghan Coal Co., or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation, or accidental injuries or deaths suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Ready & Callaghan Coal Company, shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Ready and Callaghan Coal Co.
(Seal)
Michael Ready,
President.
Walter M. Ready,
Secretary.
Southern Surety Company. (Seal)
By O. W. Huncke,
Attorney in Fact.

Attest:
E. Daly,
Approved as to form:
Charles E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, August 14, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance reports that it has examined and approved the bond of the Freeman-Sweet Company with the Southern Surety Company thereon as surety for the faithful performance of its contract for changing present 5000 volt aerial construction under subways to steel pipe construction, underground armored cable or underground construction and painting poles and equipment thereon and therefore recommends the passage of the following order:

Ordered, That the bond of the Freeman-Sweet Company for the faithful performance of the above specified contract, said bond being in the penal sum of $50,000.00, be, and the same is hereby, approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
Jas. H. Lawley,
Chairman.
George W. Paullin,
Matt A. Mueller,
Willis O. Nance,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller, Nance and Paullin—Seven.

Nays—None.

The following is the contract and bond of the Freeman-Sweet Company:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR WORK ON STREET LIGHTING CIRCUITS.

THIS AGREEMENT, Made and entered into this 7th day of August, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Freeman-Sweet Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments to be made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools and labor and all appliances and appurtenances called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for changing present 5000 volt aerial construction under subways to steel pipe construction, underground armored cable or underground construction and painting metal poles and equipment thereon as called for under Divisions A and B of the attached specifications, complete, as specified.

The work done and equipment furnished shall be strictly pursuant to and in conformity with the specfications, plans and drawings. The said specifications, plans and drawings are intended to co-operate, and any work appearing in or upon the one and not mentioned in the others, shall be executed according to the true intent and meaning of the said specifications, plans and drawings, the same as though the said work was contained and described in all.

It is further covenanted and agreed that the work specified herein shall be executed under the general direction and supervision of the Electrical Engineer of The Sanitary District of Chicago and his properly authorized agents. The Commissioner of Gas and Electricity of the City of Chicago and his duly authorized agents shall inspect all work performed hereunder and all materials,, supplies and electrical equipment used in such work and shall have full power to reject or condemn any and all work performed under this contract and all such materials, supplies and electrical equipment which in his opinion do not conform to the spirit, terms and conditions herein expressed. The Commissioner of Gas and Electricity shall calculate and determine the quantities and amounts of the work performed under this contract and shall certify in writing to the Electrical Engineer of Said Sanitary District the several amounts to be paid said Contractor as the work progresses, provided that all sums due said Contractor for performing "extra work" shall be determined jointly by the Electrical Engineer of the Sanitary District and the Commissioner of Gas and Electricity of the City of Chicago.

To prevent all disputes and ligitation, it is further agreed by and between the said Sanitary District and said Contractor that said Electrical Engineer and said Commissioner of Gas and Electricity shall jointly determine all questions in relation to said work and the construction thereof, and they shall in all cases decide all questions which may arise relative to the execution of the work under this contract on the part of the said Contractor and their estimate and decision shall be final and conclusive; and such estimate and decision, in case any question may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Electrical Engineer" or "Engineer" are used herein, they shall be understood to mean Electrical Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the words "Commissioner" or "Commissioner of Gas and Electricity" are used herein, they shall be understood to mean the Commissioner of Gas and Electricity of the City of Chicago.

Wherever the words "the work" are used herein they shall be interpreted

to mean the complete work, including all material, labor, tools and appliances necessary to perform and complete everything specified or implied in the contract or shown on the specifications, plans and drawings, in full compliance with the terms and conditions hereof.

Whenever, under the provisions hereof, an order from the Engineer, or the Commissioner, to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Electrical Engineer of The Sanitary District of Chicago, or the Commissioner of Gas and Electricity of the City of Chicago.

SPECIFICATIONS.

DIVISION A.

CHANGING OF PRESENT 5000 VOLT AERIAL CONSTRUCTION UNDER SUBWAYS TO STEEL PIPE CONSTRUCTION, ARMORED CABLE CONSTRUCTION OR STANDARD UNDERGROUND CONSTRUCTION.

General.

(1) These specifications cover the dismantling and removal of the present 5000 volt lighting circuits of the City of Chicago at various steam railroad and elevated railroad subways in the City of Chicago, and re-constructing said circuits at these points as hereinafter specified and as shown on City of Chicago plans and drawings hereinafter referred to and made a part hereof. The Commissioner of Gas and Electricity will furnish to the Contractor all permits that may be necessary to perform the work specified herein.

(2) It is the intent of these specifications, plans and drawings to provide for the work in a complete and satisfactory manner, and the prices bid on the work include the furnishing of all materials, except materials which are specified to be furnished by the City of Chicago, and the furnishing of all labor, tools, appliances and appurtenances that may be necessary to complete the work in the manner contemplated.

Steel Pipe Construction.

(3) At approximately twenty-five (25) subways to be hereafter designated the present aerial construction shall be replaced by what may be termed "steel pipe construction." This will consist in general of installing 5000 volt lead covered cable in steel pipe supported under the subway structure installing potheads at the ends of the pipe and connecting the new cable through the potheads to the existing overhead street lighting circuits. The details of the method to be followed for this class of construction are shown on City of Chicago drawing No. 7601, dated March 27, 1916.

(4) In cases where the existing poles of the aerial street lighting circuits are too great a distance from the subway entrance to permit connections between the new cable and the existing overhead circuits, additional poles shall be set and cross arms, pins and insulators placed thereon and the existing overhead circuits shall be terminated on these new cross arms and connection made to the new cable under the subway. All such new poles that may be required will be furnished by the City of Chicago and delivered to the Contractor at the Storeyard of the City of Chicago, located at 712 S. Halsted street.

(5) A typical example of the method of construction to be employed is shown on City of Chicago drawing No. M-2441, dated May 9, 1919.

Armored Cable Construction.

(6) At approximately forty (40) subways to be hereafter designated the present aerial construction will be replaced with what may be termed "armored cable construction." This will consist in general of installing steel pipe laterals up existing poles or on new poles to be installed, and of installing 5000 volt lead covered, armored cable in a trench in the parkway and through the laterals above mentioned and installing necessary potheads and connecting the new cable to the existing aerial circuit. An example of this last construction is shown on City of Chicago drawing No. M2441, dated May 9, 1919.

Standard Underground Construction.

(7) At approximately twenty (20) subways the present aerial construction will be replaced with standard underground construction. This will consist in general of the installation of manholes at either end of the subway, the construction of a one (1), two (2) or three (3) duct conduit line connecting these manholes, installing

steel pipe laterals from said manholes up existing poles or new poles to be installed, and installing 5000 volt lead covered cable in such conduit line and laterals connecting said cables with the existing aerial circuits.

(8) All manholes shall be constructed in accordance with City of Chicago drawing No. 7663 and shall be furnished with standard frames and covers in accordance with City of Chicago drawings No. 7223 and No. 7660. Conduit lines connecting manholes shall be of either fibre or tile as ordered and shall be constructed in accordance with standard City of Chicago methods as shown on City of Chicago drawing No. 7653.

(9) Steel pipe laterals required from the manhole up the pole shall be in accordance with standard City of Chicago methods as shown on City of Chicago drawing No. 7657.

(10) Single conductor potheads equal in every respect to G. & W. No. 10 type S vertical pothead shall be installed at the end of cable.

(11) At the point where the cable leaves the steel pipe lateral a wooden plug shall be fitted into the pipe. This plug being designated to closely fit the cable and hold same in place. After installation the plug shall be thoroughly coated with P. & B. paint or equal to prevent moisture getting into the lateral.

(12) Where it is necessary to install new poles, such poles will be either of the tubular type as shown on City of Chicago drawing No. 7909 or a thirty (30) foot Bates expanded steel pole. The Contractor will be responsible for all poles delivered to him by the City of Chicago until same have been erected and inspected. He will be required to replace all poles which are bent or otherwise damaged on account of mishandling either in the hauling or removal from their present location in the storeyard of the City of Chicago.

(13) The price for setting tubular steel poles shall include the digging of a 12″ diameter hole and installing a concrete envelope 12″ in diameter around the pole extending from the bottom of the pole to a point 3″ below the curb line grade. Where the poles are set in concrete sidewalks, the concrete envelope around the pole shall extend to the surface of the sidewalk and the sidewalk shall be repaired in a satisfactory manner.

(14) The price for setting each expanded steel pole shall include the digging of the proper size hole to contain a form shown on page 28 of the 1918 Edition of Bates Steel Pole Treatise, for use in connection with a 5″ section pole and the supplying of a concrete envelope of the shape provided by the form extending from the bottom of the pole to a height 3″ above grade on the sidewalk and rounded to shed water. Wherever the poles are set in sidewalks, the sidewalks shall be repaired in a satisfactory manner.

Unless otherwise ordered, all poles shall be set to the following depth:

Sand	5 feet
Clay	4 ft. 6 inches
Loose rock or rubble	4 feet
Solid rock	3 feet

Guying.

(15) Where necessary, poles shall be guyed either to other poles or to railroad structures. The guy wire used shall consist of three-eights (3/8) inch seven (7) strand galvanized cable, having a tensile strength of 4,700 pounds. Galvanized wrought iron thimbles and three bolt galvanized guy clamps shall be used for fastening the guys. Where the guys fasten to the pole, pole bands of approved type shall be used. The guy wire shall in all cases be continuous throughout its length. All guys where the distance between the pole to be guyed and the point at which the guy wire is anchored is less than forty (40) feet shall be considered as standard guys.

(16) The Contractor shall remove all surplus debris from the street within 24 hours after the poles are set and shall clean all concrete from the surface of the streets or sidewalks before same has had time to set and shall leave the street in a condition satisfactory to the Commissioner.

(17) At the base of tubular steel poles which are erected under this contract, the Contractor shall at the time of setting construct a cement mortar base not less than one and three-fourths (1¾) inches thick as measured from the outside surface of the pole. This base shall totally surround the pole and shall extend from the top of the concrete envelope above mentioned to a point three (3) inches above grade and shall be rounded off at this point to shed water. This base

shall be constructed of cement mortar, containing one part of Portland cement mixed with an approved waterproofing composition and with two parts of clean torpedo sand. The base must be troweled and finished and make a firm bond with the top of the concrete envelope and with the pole.

(18) The bottom of each steel pole shall be closed with a wooden plug through the center of which a 1″ hole has been drilled. This plug must be driven tight into the pole, leaving not more than ⅛″ of wood extending beyond the bottom of the pole.

(19) At the top of each tubular steel pole or pole extension there shall be placed as ordered, either a 4″ cast iron acorn pole top as shown on City of Chicago drawing No. 7184, or a malleable iron or steel pole top to be used as a single insulator pin as shown on City of Chicago drawing No. 7702.

(20) Where required, and as ordered, the Contractor shall install cross arms, pins and insulators conforming to City of Chicago standards.

(21) Dead end steel or malleable iron pins must be used to conform to details shown on City of Chicago drawing No. 7652.

Standard Underground Construction with One Manhole.

(22) At approximately four (4) subways, the new construction shall consist of building one manhole conforming to City of Chicago standards, and installing one pipe lateral from said manhole up existing poles or new poles which are to be set and of installing through said laterals and manholes 5000 volt lead covered cable. The work will also include the furnishing and installing of the necessary potheads and connecting the new cable to the existing aerial circuits. The general method used on this type of construction is shown on City of Chicago drawing A-2260, dated April 18, 1919.

(23) The details of the manhole and of the steel pipe laterals and potheads will be the same as specified for the standard underground construction.

Underground Construction with Handhole.

(24) This class of construction shall be identical with the construction above mentioned in Standard Underground Construction with Manhole, except that in place of the manhole a standard City of Chicago handhole shall be used. There will be approximately five (5) subways where this type of construction will be required. The general character of this construction is shown on City of Chicago drawing M-2447, dated May 26, 1919.

Cable.

(25) Whenever lead covered cable or armored cable is specified herein and necessary to be used, the same shall be No. 6, single conductor, solid, lead covered or lead covered and steel armored cable with varnished cambric insulation for 5000 volts working pressure.

Concrete.

(26) Whenever concrete is specified or is necessary for the work covered in these specifications same shall consist of a mixture of cement, sand and stone of the following proportion:

Cement .....1 part
Sand .....3 parts
Stone or washed gravel..6 parts

The cement used shall be Portland cement of an approved brand subject to City of Chicago test. No damaged or lumpy cement shall be allowed on any part of the work. The cement may be taken by weight on the basis of 95 pounds per cubic foot. Sand and stone shall be taken by volume. The sand used shall be clean, dry torpedo sand, free from dust, loam or dirt. The stone or washed gravel shall be of such size as will pass through a ¾″ ring and will not pass through a ¼″ ring. It shall be of a hard close grain quality, free from dust, organic matter, dirt or foreign substance.

(27) The cement, sand and stone or washed gravel shall be thoroughly mixed by hand or in an approved machine. When mixed by hand the ingredients shall be turned by shovels not less than two times, water shall be gradually added and the mass turned with shovels not less than three times and as many more times as will insure thorough mixing.

If mixed in a machine the mixture shall remain in the machine at least two minutes. The proportion of water employed in concrete mixing shall be sufficient to render the concrete plastic enough so that it will readily form a dense mass. The concrete

shall be used immediately after mixing and shall be thoroughly tamped if deemed necessary by the Inspector on the work.

Insulators.

(28) Where insulators are required to be furnished the same shall be of porcelain, conforming to standards used by the City of Chicago and having a rating of not less than 10,000 volts.

Painting.

(29) All steel poles, steel pipe laterals and steel pipe installed under subways, where exposed, shall after installation be thoroughly painted with one coat of a high grade steel paint equal in every respect to "Diamonnette" brand paint manufactured by the Diamond Red Paint Company of Chicago.

Samples of Materials.

(30) Samples of all materials to be used on the work covered by these specifications shall be submitted to the Commissioner of Gas and Electricity of the City of Chicago and his approval obtained before such materials are used in any part of the work.

Underground Structures.

(31) All underground structures, such as sewer, water or gas pipes, conduits and cables, and other obstructures that may be encountered, shall be taken care of by the Contractor at his own expense. No extras will be allowed for additional excavation or other expense made necessary due to any underground obstructions encountered, except at the unit prices stipulated herein and only for actual material furnished or work performed.

Pavement Repairs.

(32) The Contractor shall make temporary repairs to the satisfaction of the Engineer and the Commisioner to any pavements removed or disturbed by reason of the work hereunder. The Contractor shall also make or cause to be made at his own expense and in a manner satisfactory to the Engineer and the Commissioner, permanent repairs to all pavements disturbed by the work hereunder; provided, however, that the Contractor shall not make or cause to be made permanent repairs to any pavements which by reason of ordinances, existing contracts or for any other reason, are required to be kept in repair or to be repaired only by the City of Chicago, by railroad or public service corporations or by contractors who have agreed to maintain streets under the terms of paving contracts. No amounts will be paid to said Contractor by said Sanitary District for permanent repairs made to pavements under reserve or required to be repaired by others.

Caution.

(33) All wires constituting part of the City lighting system of the City of Chicago must at all times be considered as carrying electric current at a dangerous voltage and the Contractor shall under no circumstances permit his men to work on such circuits until he has ascertained from the Inspector on the work each day that such circuits are not alive, and as to the time when such circuits will be made alive on that day, and the Contractor shall further stop all such work and require his men to get clear of such circuits at least one hour prior to the time such circuit or circuits are to be made alive and he shall inform the Inspector on the work that all men under his employ and that all materials under his supervision are clear and will remain clear of said circuit or circuits during the time that such circuits are alive. No work shall at any time be done on any poles or equipment during the time that the circuits on such poles are carrying electric current.

DIVISION B.

PAINTING METAL POLES AND EQUIPMENT.

General.

1. These specifications include furnishing of all material, labor, tools and appurtenances for painting tubular steel poles and equipment thereon, and cast iron lamp posts now in place and being part of the existing street lighting system of the City of Chicago.

2. There will be approximately 40,000 of the tubular steel poles and 5,000 of the cast iron posts to be painted. These quantities will be used for the purpose of comparing bids on the work. The Sanitary District may increase the quantities herein stated to 60,000 tubular steel poles and 10,000 cast iron posts if it so desires. .

3. It is the intent of these specifications to provide for the work in a

complete, thorough workmanlike manner.

Paint.

4. The paint to be used on the work shall be a high grade black, steel paint, equal in every respect to "Diamonnette" brand manufactured by the Diamond Red Paint Company of Chicago.

Warning Signs.

5. "Fresh Paint" warning signs must be displayed in such manner as will show a timely warning to all concerned.

Cleaning Poles.

6. Before painting all poles shall be thoroughly cleaned by wire brushes, scrapers, benzine or other means for removing blisters, rust, millscale, grease, acids, dust, dirt or other foreign matter. Present paint which is in good condition and adheres to the iron shall not be removed but shall be brushed clean of dirt and dust before the paint is applied.

Painting.

7. After being cleaned, all abrased, bare or other spots shall be painted by brush or other approved methods with paint above specified so that an even surface shall be offered before the application of the final coat. After the poles and equipment have been cleaned and bare or other spots have been painted as above specified, there shall be applied over the entire surface one coat of paint. This coat shall be worked out so as to give a uniform and even surface.

8. No painting shall be done in wet or freezing weather and all surfaces must be perfectly clean and dry when the paint is applied.

Caution.

9. All wires constituting part of the City lighting system of the City of Chicago must at all times be considered as carrying electric current at a dangerous voltage and the Contractor shall under no circumstances permit his men to work on such circuits until he has ascertained from the Inspector on the work each day that such circuits are not alive and as to the time when such circuits will be made alive on that day, and the Contractor shall further stop all such work and require his men to get clear of such circuits at least one hour prior to the time such circuit or circuits are to be made alive, and he shall inform the Inspector on the work that all men under his employ and that all materials under his supervision, are clear and will remain clear of said ciricuit or circuits during the time that such circuits are alive. No work shall at any time be done on any poles or equipment during the time that the circuits on such are carrying electric current.

GENERAL CONDITIONS.

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled "An Act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois River," approved May 29th, 1889, in force July 1st, 1889, and all amendments and acts supplementary thereto.

Chicago City Ordinances.

Art. 2. The said Contractor agrees to carry on all work provided for in this contract in strict conformity with the ordinances and rules passed by the City of Chicago covering the construction of said work, and to conform to all other regulations or ordinances of the City of Chicago.

Omission on Plans.

Art. 3. The plans and drawings furnished, or to be furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications, plans or drawings.

Approximate Quantities.

Art. 4. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this contract, which have been estimated as stated in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District

will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and the Commissioner, and in accordance with the specifications, plans and drawings herein mentioned and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Examination of Site.

Art. 5. All bidders for the work under this contract are required before submitting proposals to examine the sites of the work and adjacent premises, and the various means of approach to the sites, and to make necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract; also as to the facilities for delivering, handling and installing the equipment at said sites and the conditions and the difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist or that may hereafter exist, or of difficulties that will be encountered in the execution of the work hereunder, as a result of failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this contract, or will be accepted as a basis for any claim whatsoever for extra compensation.

Interference.

Art. 6. The Contractor shall so conduct the work of installation that there shall be no interference with work which may be in progress under contracts with other contractors.

The Contractor shall, at his own expense, repair any damage to any real or personal property occasioned by the Contractor in the execution of this contract.

Changes in Drawings.

Art. 7. The Sanitary District reserves the right to make any changes in the specifications, plans and drawings which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby.

If such alterations increase the quantity of work to be done, where unit prices are specified, such increase shall be paid for according to the quantity of work actually done at the unit price specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done, where unit prices are specified, they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

Extra Work.

Art. 8. The Contractor shall perform only such extra work as the Engineer and Commissioner may direct in their written order, provided however, that no extra work, the total price or cost of which is in excess of $500.00 shall be performed by the Contractor until the Engineer and Commissioner are authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done, which is not contemplated or covered by the prices herein specified, the Engineer and Commissioner shall fix such prices for the work as they shall consider just and equitable, and the Contractor shall abide by such prices provided he enters upon such work with a full knowledge of the prices so fixed by said Engineer and Commissioner; but if the Contractor declines to execute said work at the prices so fixed by said Engineer and Commissioner, then the Sanitary District may contract with any person

or persons for its execution, the same as if this contract had never existed; and if extra work, or work not provided for in this contract is performed by the Contractor before prices have been fixed for such work, then the Engineer and Commissioner shall estimate the same at such prices as they shall consider just and reasonable, and their decision shall be final and binding on both parties hereto and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided that if the extra work done under this contract is of such a nature, being distinct from other work being done by said Contractor, that in the opinion of the Engineer and Commissioner the actual cost of the same can be determined, then the said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work, as determined by the Engineer and Commissioner, with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer and Commissioner for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor, or for damages from any cause whatsoever must be reported to the Engineer and Commissioner in writing at the time such labor or material is furnished or such damages occur, and they must also be presented in writing to them and to the Committee on Engineering of the Board of Trustees of said Sanitary District within ten (10) days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer and Commissioner each day a signed statement of the extra labor and material furnished during that day. The joint written orders of the Engineer and the Commissioner to the Contractor to perform any extra work therein mentioned, and the written notices and statements of the work performed, hereinabove and hereinafter required from said Contractor, are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 9. It is further agreed that in all cases of question or dispute arising or growing out of this contract in any way regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of the violation of any of the provisions of this contract, the decision of the Engineer and Commissioner shall be final and binding on both parties hereto. In estimating the cost of extra work, the cost of material and equipment shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amount paid for same, as shown by the payrolls of the Contractor, with cost of indemnity insurance added when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowanve of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, when requested by the Engineer, certify, by his affidavit, the correctness of the amounts paid for material, equipment and labor.

Supervision, Materials, Workmanship and Inspection.

Art. 10. All work provided for under this contract shall be done under the direction and supervision of the Engineer and the Commissioner and their properly authorized agents.

An inspection of any and all material furnished for use in work shall be made at the site of the work after delivery of the material; provided that the Engineer or Commissioner may at their option perform, or have performed, inspection of material at points other than the site of the work.

All equipment and materials of whatsoever kind to be used in the work shall be subject to inspection and approval of the Engineer and the Commissioner and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately, and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer or the Commissioner. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all equipment and materials and work, which during the

progress and before its final acceptance, may become damaged from any cause, or do not for any reason satisfy the requirements of these specifications, shall be removed and replaced by good and satisfactory equipment, materials and work, without extra charge therefor. The Engineer and the Commissioner and their representatives shall have at all times free access to every part of the work, and to all places where equipment or material to be used in the work is manufactured, or stored, and shall be allowed to examine any equipment or material furnished for use in the work under this contract.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective equipment, material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates, shall be subject to the correction of the final certificate.

Plant.

Art. 12. The Contractor shall furnish all material and supplies, plant, staging and falsework, tools and implements, and teams; in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer and the Commissioner, all necessary barricades, and other protections, lights and signs, necessary for the proper protection of the public. The cost of all the above shall be covered by the amounts paid at the lump sum or unit prices herein specified, and no extra charge shall be made therefor.

Night, Sunday and Holiday Work.

Art. 13. Whenever the Contractor shall be permitted or directed to perform work on Sundays or a holiday, he shall give written notice to the Engineer and the Commissioner so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer, and the Commissioner, and no extra compensation shall be allowed therefor.

Cleaning Site.

Art. 14. The Contractor shall keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site, if, in the opinion of the Engineer or the Commissioner such material, debris or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor further agrees to remove all materials, implements, barricades, staging, falsework, debris and rubbish connected with or caused by said work immediately upon the completion of the same, and to leave the premises in perfect condition in so far as affected by the work under this contract.

Precautions.

Art. 15. The Contractor shall take whatever precaution that may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Superintendence.

Art. 16. The Contractor shall at all times have a competent foreman, superintendent or other representative on the work who shall have full authority to act for the Contractor and to receive and execute orders from the Engineer or the Commissioner who shall receive shipments of material to the Contractor, and who shall see that the work is executed in accordance with the specifications and plans and drawings and the orders of the Engineer or the Commissioner thereunder. The Contractor shall furnish the necessary watchmen to protect all materials, tools, and equipment and all work performed by the Contractor until said work has been completed and accepted by the Engineer and the Commissioner.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer or the Commissioner, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work

shall be employed where special skill is required.

Patents.

Art. 18.. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in any wise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 19. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or in the vicinity of the work herein contracted to be done, or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damages, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for injury to real or personal property and for any personal injury sustained by any person growing out of any act or doing of himself, or of his employees, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries to real or personal property or injuries received or sustained by any person or persons, from said Contractor, her servants, agents or employees, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any omission or act of said Contractor, his agents or employees; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employer's Liability Act.

Art. 20. The Contractor further agrees to insure to his employees or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled "An act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State," providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an act entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10th, 1911, in force May 1st, 1912," approved June 28th, 1913, in force July 1st, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in any wise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in and about the performance of this contract.

Responsibility of Contractor.

Art. 21. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor shall be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it, except as hereinafter specified. The

Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employees.

The Contractor shall not assign by power of attorney or otherwise any portion of the moneys that may become due through the performance of any of this contract.

Subletting Work.

Art. 22. The Contractor shall not sublet any part of the work herein mentioned to any person or corporation that is not in the opinion of the Engineer and the Commissioner, competent, experienced and financially able to properly carry out and execute the same, and in the event that said Contractor desires to sublet any part of the work he shall, prior to such subletting, submit to the Engineer and the Commissioner a statement showing the character of the work and the party or parties to whom it is proposed to sublet the same and his or their experience, financial ability and other qualifications for properly carrying out and completing the same and the decision of the Engineer and the Commissioner as to said qualifications, financial ability, experience and competency shall be final and binding upon both parties hereto. It is further understood and agreed that such subletting, or the approval thereof by the said Engineer, and the Commissioner shall not directly or indirectly release or modify the responsibility of the Contractor for the satisfactory and entire completion of said work and each and every part and portion thereof, and that said Sanitary District shall not be liable to any sub-contractor for any claim or damages whatsoever. In case any party or parties to whom any work under this contract shall have been sublet, shall disregard the directions of the Engineer or Commissioner or their duly authorized representatives, or shall furnish any unsatisfactory work, or shall fail or refuse in any way to conform to any of the conditions of this contract, then, in that case, upon the written order of the Engineer or Commissioner, the Contractor shall require said party or parties in default to discontinue work under this contract. Said work shall be corrected or made good and shall be completed by the Contractor or by such other party or parties agreed upon who shall be satisfactory to the Engineer and the Commissioner.

It is distinctly understood and agreed that the subletting of the work covered by this contract or any part thereof, except as herein above provided shall, after twenty (20) days' notice to said Contractor, work a forfeiture of this contract at the option of the Sanitary District.

Liens.

Art. 23. If at any time during the progress of said work the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies or any sort or kind used or consumed in, upon or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor, or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make payment hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer and the Commissioner the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer and Commissioner deem sufficient.

Time and Progress.

Art. 24. The Contractor agrees to begin the work covered by this contract within ten (10) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor and to complete all work within ninety (90) days from the date of approval of said bond.

It is understood and agreed that time is of the essence of this con-

tract, and that a failure on the part of the Contractor to complete the work herein specified within the time will result in loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 25. It is, therefore, covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work under Divisions A and B within the time specified in Article 24, then said Contractor shall pay to said Sanitary District the sum of ten dollars ($10.00) for each and every day that said Contractor shall be in default in the completion of said work.

Said sum of ten dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages which said Sanitary District will suffer by reason of such default, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the same, the Engineer and Commissioner shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto.

It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments shall not in any respect constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to time and liquidated damages for delays.

Extensions or Additions.

Art. 26. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer and Commissioner will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period of time as may be fixed by said Engineer and Commissioner, and their decision shall be final and binding upon both parties hereto, provided that in such case the Contractor within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time but no extension of time shall be given for any minor alterations or additions, and the provisions of this article shall not otherwise alter, change or invalidate the provision of this contract with reference to liquidated damages, and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 27. The Contractor shall delay or suspend the progress of the work, or any part thereof, whenever he shall be so required by written order of the Engineer and Commissioner, and for such periods of time as the Engineer and Commissioner may order, provided that in the event of such delay or delays or of such suspension or suspensions, of the progress of the work or any part thereof, the time for the completion of the work so suspended or of the work delayed by such suspension or suspensions, shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer and Commissioner shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay or delays, suspension or suspensions.

Unavoidable Delay.

Art. 28. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the Sanitary District or of the City of Chicago, or by riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, earthquake, cyclone, floods, or through any default of other parties under contract with said Sanitary District, or due to strikes, or to other causes, which causes of delay mentioned in this article, in the opinion of the Engineer and Commissioner are entirely beyond the control of the Contractor, then the time herein fixed for the completion of the work so delayed

shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance shall be made unless at the commencement of the delay the Contractor notify the Engineer and Commissioner in writing within four (4) days after the beginning of such delay.

It is further expressliy agreed that said Contractor shall not be entitled to any damages or compensations from the said Sanitary District on account of any delays resulting from any of the causes above specified in this article, except for extra premiums on his bond, actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or the City of Chicago or by other parties under contract with said Sanitary District. The Engineer and Commissioner shall decide the number of days that said Contractor has been so delayed and their decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 29. It is further agreed by and between the parties hereto that if said Contractor abandons this contract or fails financially or from any other cause whatsoever is unable to carry out the terms and conditions of this contract and complete the said work; or if this contract shall be assigned by said Contractor without the consent of the Engineer and Commissioner; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer or the Commissioner; or if, in the opinion of the Engineer and the Commissioner the said work has been or is being delayed by the Contractor; then said Sanitary District may declare this contract forfeited either as to a portion of the work or the whole thereof; and thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other Contractors if all or any part of said work is completed by a new contract or contracts.

The cost of fully completing all the work under this contract as aforesaid by a new contract or contracts shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the said Sanitary District out of any moneys that may be due or may at any time thereafter become due to the said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as aforesaid, then the Contractor and his bondsmen shall be liable to pay the amount of said deficiency.

Contractor's Bond.

Art. 30. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the full amount of this contract for the performance of the work hereunder, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

Art. 31. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the equipment and materials, and for doing all the work contemplated and specified in this contract; also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work and the whole thereof in full compliance with the drawings, plans and specifications and the requirements of the Engineer and the Commissioner under them, to-wit:

DIVISION A.

(1) For 3'-6"x6'-0"x5'-0" manholes in street, complete as specified, exclusive of valve, trap and sewer connection and exclusive of cost of removing or replacing street pavement, one hundred and forty-three dollars and no cents ($143.00) each.

(2) For 3'-6"x6'-0"x5'-0" manholes in parkway, complete as specified, exclusive of valve, trap and sewer connection, one hundred and forty dollars and no cents ($140.00) each.

(3) For sewer connections from manholes to sewer, including four (4) inch back pressure valve and trap and six (6) feet or less of pipe and connection at sewer, complete as specified, twenty-one dollars and no cents ($21.00) for each connection.

(4) For additional pipe for sewer connections in excess of six (6) feet, furnished and installed complete as specified, ninety-five cents ($0.95) per foot.

(5) For 3'x3'x4' hand hole, complete as specified, exclusive of cost of removing and replacing pavement, seventy dollars and no cents ($70.00) each.

(6) For one (1) three inch (3") single duct conduit installed in street complete as specified, exclusive of cost of removing and replacing pavement: Tile duct, ninety cents ($0.90) per trench foot. Fibre duct, eighty-five cents ($0.85) per trench foot.

(7) For two (2) three inch (3") single duct conduits installed in street complete as specified, exclusive of cost of removing and replacing pavement: Tile duct, one dollar and twenty cents ($1.20) per trench foot. Fibre duct, one dollar and fifteen cents ($1.15) per trench foot.

(8) For three (3) three inch (3") single duct conduits installed in street complete as specified, exclusive of cost of removing and replacing pavement: Tile duct, one dollar and fifty cents ($1.50) per trench foot. Fibre duct, one dollar and forty-five cents ($1.45) per trench foot.

(9) For one (1) three inch (3") single duct conduit installed in parkway complete as specified: Tile duct, eighty-eight cents ($0.88) per trench foot. Fibre duct, eighty-three cents ($0.83) per trench foot.

(10) For two (2) three inch (3") single duct conduits installed in parkway complete as specified: Tile duct, one dollar and fifteen cents ($1.15) per trench foot. Fibre duct, one dollar and seven cents ($1.07) per trench foot.

(11) For one (1) two and one-half inch (2½") steel pipe lateral installed in street complete as specified, exclusive of cost of removing and replacing pavement, ninety cents ($0.90) per trench foot.

(12) For one (1) two and one-half inch (2½") steel pipe lateral installed in parkway complete as specified, ninety cents ($0.90) per trench foot.

(13) For two (2) two and one-half inch (2½") steel pipe laterals installed in street complete as specified, exclusive of removing and replacing pavement, one dollar and seventy cents ($1.70) per trench foot.

(14) For two (2) two and one-half inch (2½") steel pipe laterals installed in parkway complete as specified, one dollar and seventy cents ($1.70) per trench foot.

(15) For one (1) two and one-half inch (2½") steel pipe lateral driven under pavement, installed complete as specified, one dollar and forty cents ($1.40) per foot of pipe.

(16) For two (2) two and one-half inch (2½") steel pipe laterals driven under pavement, complete as specified. one dollar and forty cents ($1.40) per foot of pipe.

(17) For two and one-half inch (2½") steel pipe bends, installed complete as specified, three dollars and fourteen cents ($3.14) each.

(18) For three inch (3") steel pipe bends, installed complete as specified, five dollars and twenty-five cents ($5.25) each.

(19) For two and one-half inch (2½") steel pipe laterals fastened to pole, installed complete as specified, eighty cents ($0.80) per foot of pipe.

(20) For cutting and removing street pavement, all types, one dollar and twenty cents ($1.20) per sq. yd.

(21) For temporary street repaving, all types, seventy cents ($0.70) per sq. yd.

(22) For permanent street repaving, all types, three dollars and eighty cents ($3.80) per sq. yd.

(23) For cutting and removing sidewalk and making permanent repairs to same, one dollar and eighty-two cents ($1.82) per sq. yd.

(24) For furnishing all material and installing complete as specified the construction at each end of subways as shown on drawing No. 7601, revised March 27, 1916, using single conductor potheads, price for each end of subway, thirty-five dollars and no cents ($35.00).

(25) For furnishing all material and installing complete as specified the construction at each end of subways as shown on drawing No. 7601, revised March 27, 1916, using two conductor pothead, price for each end of subway, forty-nine dollars and no cents ($49.00).

(26) For furnishing and installing steel pipe and one (1) No. 6, 5000-volt lead covered cable therein to connect the two ends of the subway construction, complete as specified and as shown on drawing No. 7601, revised March 27, 1916, one dollar and twenty-five cents ($1.25) per foot of pipe.

(27) For furnishing and installing steel pipe and two (2) No. 6, 5000-volt lead covered cables therein to connect the two ends of the subway construction, complete as specified and as shown on drawing No. 7601, revised March 27, 1916, one dollar and forty-five cents ($1.45) per foot of pipe.

(28) For furnishing and installing one (1) No. 6, 5000-volt single conductor, lead covered cable in conduit or in lateral, complete as specified, twenty-two cents ($0.22) per foot of cable.

(29) For furnishing and installing two (2) No. 6, 5000-volt, single conductor, lead covered cables in conduit or in lateral, complete as specified, twenty-one cents ($0.21) per foot of cable.

(30) For furnishing and installing three (3) No. 6, 5000-volt, single conductor, lead covered cables in conduit or in lateral, complete as specified, twenty cents ($0.20) per foot of cable.

(32) For furnishing and installing one (1) No. 6, 5000-volt, single conductor, lead covered cable in trench in parkway, complete as specified, thirty-seven cents ($0.37) per foot of cable.

(33) For furnishing and installing two (2) No. 6, 5000-volt, single conductor, lead covered cables in trench in parkway, complete as specified, twenty-nine cents ($0.29) per foot of cable.

(34) For furnishing and installing three (3) No. 6, 5000-volt, single conductor, lead covered cables in trench in parkway, complete as specified, twenty-six cents ($0.26) per foot of cable.

(35) For furnishing and installing four (4) No. 6, 5000-volt, single conductor, lead covered cables in trench in parkway, complete as specified, twenty-five cents ($0.25) per foot of cable.

(36) For furnishing and installing five (5) No. 6, 5000-volt, single conductor, lead covered cables in trench in parkway, complete as specified, twenty-four cents ($0.24) per foot of cable.

(37) For furnishing and installing one (1) No. 6, 5000-volt, single conductor, armored cable in lateral, complete as specified, forty-two cents ($0.42) per foot of cable.

(38) For furnishing and installing two (2) No. 6, 5000-volt, single conductor, armored cable in lateral, complete as specified, forty cents ($0.40) per foot of cable.

(39) For furnishing and installing three (3) No. 6, 5000-volt, single conductor, armored cable in lateral, complete as specified, forty cents ($0.40) per foot of cable.

(40) For furnishing and installing four (4) No. 6, 5000-volt, single conductor, armored cable in lateral, complete as specified, forty cents ($0.40) per foot of cable.

(41) For furnishing all material and making splice on No. 6, 5000-volt, single conductor lead covered cable, complete as specified, six dollars and forty cents ($6.40) per splice.

(42) For furnishing all material and making splice on No. 6, 5000-volt, single conductor, armored cable, complete as specified, six dollars and ninety cents ($6.90) per cplice.

(43) For furnishing, installing and connecting single conductor standard pothead, complete as specified, ten dollars and ninety cents ($10.90) each.

(44) For furnishing, installing and connecting single conductor pole top pothead, complete as specified, twelve dollars and eighty cents ($12.80) each.

(45) For furnishing, installing and connecting two (2) conductor pole top pothead, complete as specified, twenty-four dollars and no cents ($24.00) each

(46) For furnishing, installing and connecting three (3) conductor pole top pothead, complete as specified, thirty-one dollars and no cents ($31.00) each.

(47) For furnishing, installing and connecting four (4) conductor pole top pothead, complete as specified, thirty-six dollars and no cents ($36.00) each.

(48) For furnishing all material (except poles) and all labor for setting 30 ft. steel poles in 12-inch concrete envelop, including delivery of pole, complete as specified, eighteen dollars and no cents ($18.00) per pole.

(49) For furnishing all material (except poles) and all labor for setting 30 ft. wood poles in 12-inch concrete envelop, including delivery of pole, complete as specified, fourteen dollars and no cents ($14.00) per pole.

(50) For removing present steel

poles and delivering same to storeroom of City of Chicago, ten dollars and no cents ($10.00) per pole.

(51) For removing present wood poles and delivering same to storeroom of City of Chicago, ten dollars and no cents ($10.00) per pole.

(52) For furnishing and installing two (2) pin malleable iron cross arms complete with wood pins and insulators, as specified, three dollars and forty cents ($3.40) per arm.

(53) For furnishing and installing four (4) pin malleable iron cross arms complete with wood pins and insulators, as specified, five dollars and fifty cents ($5.50) per arm.

(54) For furnishing and installing six (6) pin malleable iron cross arms complete with wood pins and insulators, as specified, ten dollars and no cents ($10.00) per arm.

(55) For furnishing and installing two (2) pin wood cross arms complete with wood pins and insulators, as specified, one dollar and sixty cents ($1.60) per arm.

(56) For furnishing and installing four (4) pin wood cross arms complete with wood pins and insulators, as specified, two dollars and no cents ($2.00) per arm.

(57) For furnishing and installing six (6) pin wood cross arms complete with wood pins and insulators, as specified, two dollars and seventy-five cents ($2.75) per arm.

(58) For furnishing and installing iron insulator pins, as specified, ninety cents ($0.90) each.

(59) For furnishing all material and installing forty (40) foot guys where required, complete as specified, five dollars and no cents ($5.00) per guy complete.

(60) For each additional five (5) feet of guy wire in excess of forty (40) feet for each guy, furnished and installed complete, as specified, twenty-five cents ($0.25).

(61) For furnishing and installing each 4"x3' pole extension, including pole collars, adapters and acorn tops, complete as specified, seventeen dollars and eighty-five cents ($17.85).

(62) For furnishing and installing each 4"x5' pole extension, including pole collars, adapters and acorn tops, complete as specified, twenty-one dollars and twenty-five cents ($21.25).

(63) For furnishing and installing single malleable iron pole steps and bands, complete as specified, ninety-eight cents ($0.98) each.

(64) For furnishing and installing double malleable iron pole steps and bands, complete as specified, one dollar and thirty-two cents ($1.32) each.

(65) For furnishing and installing one (1) No. 6 W.P. aerial wire and tieing same in on insulators, complete as specified, five cents ($0.05) per foot of wire.

(66) For furnishing and installing two (2) No. 6 W.P. aerial wires and tieing same in on insulators, complete as specified, five cents ($0.05) per foot of wire.

(67) For removing No. 6 aerial wire and delivering same to storeyard of City of Chicago, one cent ($0.01) per foot of wire.

(68) For removing fixtures from subway structures and delivering same at storeyard of City of Chicago, one dollar and twenty-five cents ($1.25) each.

(69) For removing cross arms and delivering same to storeyard of City of Chicago, twenty-five cents ($0.25) each.

(70) For additional labor of foreman and lineman, one dollar and forty cents ($1.40) per hour.

(71) For additional labor of each lineman, one dollar and twenty-five cents ($1.25) per hour.

(72) For additional labor of each groundman or lineman's helper, one dollar and no cents ($1.00) per hour.

(73) For additional charge for truck or team, including driver, one dollar and sixty cents ($1.60) per hour.

DIVISION B.

For painting tubular steel poles and equipment thereon, complete as specified, one dollar and forty-five cents ($1.45) each.

For painting cast iron lamp posts, complete as specified, fifty cents ($0.50) each.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents and patented material, appliances and processes used in the work hereunder. Before final payment is made the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, pat-

ented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 32. The said Sanitary District agrees to pay said Contractor the sums herein specified in monthly installments as the work progresses upon certificates signed by said Engineer and Commissioner, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed eighty-seven and one half (87½) per cent of the value of the work properly performed under this contract, and that the remaining twelve and one half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and the delivery of the final certificates of said Engineer and Commissioner, and payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 33. Upon the completion of all the work included under this contract, the said Engineer and Commissioner shall give their certificate to that effect, whereupon the said Sanitary District will at the expiration of thirty (30) days after such completion and delivery of such certificates pay, and it hereby binds itself to pay to said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have already been paid, and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the heirs and legal representatives of said Contractor

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its president and to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.

By.....,

Chairman of Its Committee on Finance.

Attest:

.....,

Clerk.

.....(Seal)

.....(Seal)

.....(Seal)

Attest:

.....,

Secretary.

Approved:

.....,

Commissioner of Gas and Electricity of the City of Chicago.

Approved as to Engineering:

.....,

Electrical Engineer.

Approved as to Form:

.....,

Asst. Attorney.

.....,

Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Freeman-Sweet Company, a corporation organized under the laws of the State of Illinois, as principal and as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of fifty thousand dollars and no one-hundredths ($50,000.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administractors, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 7th day of August, A. D. 1919.

The Condition of the Above Obligation Is Such, That whereas the above bounden Freeman-Sweet Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 7th day of August, A. D 1919, for doing all the work, and furnishing all the materials, tools, labor, appliances and appurtenances necessary for changing present 5000 volt aerial construction under subways to steel pipe construction, underground armored cable or underground construction and painting metal poles and equipment thereon.

Now, If the said Freeman-Sweet

Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans and drawings accompanying the same, and in the time and manner therein prescribed, and further shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees which in any wise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in any wise result from the carelessness or neglect of said Freeman-Sweet Company, its agents, employees or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago, any sum or sums of money determined by the Engineer and the Commissioner to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims for first aid, medical, surgical and hospital services and for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 28th, 1913; in force July 1st, 1913, and all Acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said Freeman-Sweet Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, and shall repay any overpayment, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suits for damages occasioned by carelessness or neglect of said Freeman-Sweet Company, or agents, employees or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28th, 1913; in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or death suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Freeman-Sweet Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

.....(Seal)
.....(Seal)
.....(Seal)
.....(Seal)

Approved as to form:
.....A. D. 1919.
Assistant Attorney.
.....,
Attorney.
.....
.....
.....
.....

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 12, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll First Half of August, 1919.

L. F. King, Clerk (general payroll)		$ 32,250.71

Construction Account.

L. F. King, Clerk (expenses of employes)	$ 144.61	
Jas. O. Heyworth (labor and material for hand railing, I. & M.)	994.26	
Nash-Dowdle Company (labor and material, temporary pumping service at Evanston, Ill.)	775.00	
Carl John Stein Company (plumbing service, etc., Calumet Sewage Pumping Station)	612.50	
Nash Bros. (moving office)	75.69	
The Kellogg-Mackay Company (pipe fittings)	26.64	
Public Service Company of Northern Illinois (electrical energy)	.50	
		2,629.20

Maintenance and Operation Account.

L. F. King, Clerk (expenses of employes)	$ 90.42	
L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	198.40	
L. F. King, Clerk (freight charges on fuel, 39th St. Pumping Station)	203.69	
L. F. King, Clerk (freight charges on fuel, 39th St. Pumping Station)	140.41	
L. F. King, Clerk (freight on fuel, 39th St. Pumping Station)	54.54	
H. W. Johns-Manville Company (cement, etc., 39th St. Pumping Station)	48.50	
American Supply Company (white waste, 39th St. Pumping Station)	50.22	
Wadsworth-Howland Company (paint, 39th St. Pumping Station)	48.52	
Wilbur J. Connell (screws, etc., 39th St. Pumping Station)	42.78	
United Asbestos & Packing Company (valve steam packing, 39th St. Pumping Station)	16.80	
Standard Oil Company (kerosene and gasoline, 39th St. Pumping Station)	15.75	
Weil Bros. (pipe fittings, 39th St. Pumping Station)	13.24	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	8.50	
Wilbur J. Connell (galvanized pails, 39th St. Pumping Station)	6.50	
Chicago Chemical & Polish Company (metal polish, 39th St. Pumping Station)	5.56	
Geo. Corbett Boiler & Tank Company (repairs, Lawrence Ave. Pumping Station)	486.15	
Anderson Oil Company (engine and cylinder oil, Lawrence Ave. Pumping Station)	121.55	
Thos. B. Banner (beam clamps, Lawrence Ave. Pumping Station)	40.70	
Amounts carried forward	$ 1,592.23	$ 34,879.91

Amounts brought forward	$ 1,592.23	$ 34,879.91
Jos. T. Ryerson & Son (beams, bars steel and chain, Lawrence Ave. Pumping Station)	36.83	
Geo. B. Carpenter & Co. (load chain and load hook, Lawrence Ave. Pumping Station)	16.80	
Stebbins Hardware Company (stocks and dies, Lawrence Ave. Pumping Station)	13.39	
Stebbins Hardware Company (galvanized sash cord, Lawrence Ave. Pumping Station)	8.75	
Kirby Motor Trucking Company (cartage charges, Lawrence Ave. Pumping Station)	8.24	
Geo. B. Carpenter & Co. (paper mill hooks, Lawrence Ave. Pumping Station)	4.09	
Stebbins Hardware Company (fuse wire and friction tape, Lawrence Ave. Pumping Station)	3.40	
H. M. Hooker Company (oil, Lawrence Ave. Pumping Station)	2.92	
Wire Wheel Corporation of America (new wire wheel)	25.03	
Dan Smith Motor Company (piston, etc.)	26.00	
Vesta Accumulator Company (head lamp)	12.69	
Auto Radiator Mfg. Company (radiator repaired)	7.50	
Consumers Company (bags medusa)	7.25	
General Electric Company (fusible links)	4.05	
Stewart-Warner Speedometer Corporation (pinion with nut)	.70	
Jos. Sandeen (teaming)	79.60	
Green Engineering Company (drive links and clips)	23.60	
Wilbur J. Connell (floor brushes)	10.39	
		1,884.46

I. and M. Canal and Illinois River Conditions Department.

E. H. Heilbron (expenses of employes)	$ 130.91	
E. H. Heilbron (expenses of employes)	93.12	
Elliott & Harman Engineering Company (one plant table outfit)	175.00	
Hotel Commercial (boarding and lodging of survey party)	128.75	
Kay Bros. (livery service)	100.00	
The New Clifton Hotel (board and lodging of field party)	83.80	
H. W. Wilkey (repairs to launch "Skip-a-Long")	102.78	
H. & E. F. Hunter (lumber)	46.04	
Standard Oil Company (gasoline)	21.90	
Public Service Company of Northern Illinois (electric and water service)	16.69	
Geo. C. Gleason (brushes, etc.)	14.25	
Graham Seltzer Company (dry cell battery, etc.)	10.14	
Chillicothe Hardware Company (stovepipe, etc.)	7.93	
American Blue Print Paper Company (blue prints)	5.07	
G. & K. Plumbing Company (pipe, etc.)	3.75	
D. I. Davis (tee and ells, etc.)	2.40	
		942.53

Law Department.

Electrical Record (subscription)	$ 2.00	
Frank Hren & Co. (carpenter work and material)	24.70	
John Grady (services rendered as witness)	15.00	
Kirby Motor Trucking Company (motor truck service)	10.00	
W. M. Brinkman (services rendered in connection with cases of District vs. C. R. I. & P. R. R. Co.)	1,000.00	
		1,051.70
Amount carried forward		$ 38,758.60

Amount brought forward		$ 38,758.60
Real Estate Department.		
F. W. Worst (cutting and destroying Canada thistles at Lockport)	$ 70.00	
Gust V. Strand (cutting and destroying Canada thistles at Lemont)	70.00	
Southwest Printing Company (printing)	40.00	
Walger Awning Company (new awning for Real Estate Department)	11.05	
		191.05
Police Department.		
L. F. King, Clerk (expenses of keeping and cleaning Marshal's car for the months of May and July)	$ 50.00	
L. F. King, Clerk (25-ride ticket to Lockport)	23.76	
Tedens & Dystrup (hay, oats, etc.)	100.56	
Juergens & Anderson Company (one gold Marshal's star)	27.00	
Chicago Telephone Company (telephone service)	6.08	
N. Kettmann (horseshoes)	7.20	
L. F. King, Clerk (expenses of employes)	31.12	
		245.72
General Account.		
Standard Oil Company (rent of main office)	$ 2,630.04	
J. L. Jacobs & Co. (services in connection with the investigation on the classification and standardization of positions and employment)	1,326.00	
L. F. King, Clerk (expenses of officials at Springfield re legislative matters)	77.90	
L. F. King, Clerk (expenses of employe)	13.84	
Edmund D. Adcock (services rendered in connection with Lake Level controversy)	1,232.41	
Fred Klein Company (printing Proceedings)	355.50	
Chicago Telephone Company (telephone service)	181.12	
Alexander H. Revell & Co. (desk and chair)	93.60	
The Fred J. Ringley Company (printing)	90.00	
The Economist (advertising)	69.30	
Commonwealth Edison Company (Mazda lamps)	27.65	
Parker's Towel Supply Company (towel service)	26.00	
Fred Klein Company (binding Proceedings)	20.75	
20th Century Press Clipping Bureau (clippings)	10.00	
Chicago Telephone Company (telephone service)	3.78	
		6,157.89
Clerical Department.		
L. F. King, Clerk (postage stamps)	$ 200.00	
Albert Hancock & Co. (special covered boxes)	196.00	
John M. Smyth Company (flat top boxes, etc.)	153.00	
Burr-Vack Company (pencils, etc.)	37.20	
F. J. Koch Company (binding six volumes full canvas)	21.00	
Walden W. Shaw Livery Company (automobile service)	12.10	
Walden W. Shaw Livery Company (automobile service)	7.35	
Walden W. Shaw Livery Company (automobile service)	1.85	
Riddle & Wunderle (rubber stamps)	.65	
		629.15
Electrical Department.		
L. F. King, Clerk (expenses of employes)	$ 634.09	
L. F. King, Clerk (expenses of employe)	19.86	
L. F. King, Clerk (expenses of employe)	2.60	
General Electric Company (lead covered cable)	12,565.24	
General Electric Company (lead covered cable)	2,545.25	
Amounts carried forward	$ 15,767.04	$ 45,982.41

Amounts brought forward	$ 15,767.04	$ 45,982.41
The Kellogg-Mackay Company (pipe bends)	493.75	
Union Petroleum Company (gasoline)	446.21	
Wilbur J. Connell (lag screws, etc.)	290.89	
L. L. Fleig & Co., Inc. (pressboard)	47.30	
Monarch Electric Company (stranded wire)	39.60	
S. Deschauer (cap screws, etc.)	21.74	
G. Johnson (teaming)	26.19	
Ideal Commutator Dresser Company (commutator dresser)	18.99	
West Publishing Company (subscription)	4.00	
L. Gould & Co. (lily drinking cups)	3.75	
Joliet Motor Company (storage, etc.)	3.87	
Standard Oil Company (repairing buzzer system)	2.68	
Burr-Vack Company (Perfection calendar)	.65	
Chicago Telephone Company (telephone service)	.89	
L. F. King, Clerk (semi-monthly roll first half of July)	17,180.14	
L. F. King, Clerk (semi-monthly roll first half of August)	18,671.10	
Southwest Printing Company (printing)	17.50	
Scully Steel & Iron Company (galvanized steel)	17.41	
Jos. T. Ryerson & Son (Rd. mild steel, etc.)	16.88	
Standard Oil Company (gasoline)	16.10	
The C. H. Hanson Company (name plates)	15.80	
Green Engineering Company (beam clips, etc.)	15.00	
General Electric Company (three-tone Buell whistle, etc.)	15.31	
Humphrey & Sons Company (gear casting)	15.00	
Stebbins Hardware Company (tool chest)	14.50	
A. Kutscha & Co. (Firestone rims)	14.00	
National Ladder & Scaffold Company (ladder)	13.44	
American Blue Print Paper Company (blue prints)	13.17	
H. Channon Company (push buttons, etc.)	11.08	
Jas. Carmichael (cleaning waste pipe)	10.70	
Joliet Transfer Company (hauling charges)	10.00	
Buchanan-Daley Company (smithing coal)	9.35	
Walger Awning Company (taking down and rehanging awning)	9.20	
Air Reduction Sales Company (tank connections, etc.)	9.32	
Steele, Wedeles Company (small case Pet milk)	9.00	
The Fred J. Ringley Company (printing)	8.50	
Burr-Vack Company (rubber stamps)	7.54	
The Garden City Sand Company (torpedo sand)	7.50	
United Asbestos & Packing Co. (wire belt lace)	7.34	
Burr-Vack Company (bank pens, etc.)	7.31	
Artistic Grille Works (wooden rings for wattmeters)	7.00	
Safford Stamp Works (stamps, etc.)	6.70	
T H. Flood & Co. (United States Statutes Annotated)	6.50	
Burr-Vack Company (records)	9.00	
Miller Hardware Company (copper rivets, etc.)	5.44	
R. Hanisch Sons Company (Mazda lamps)	5.76	
United Asbestos & Packing Company (flax packing)	5.46	
The Lombard Governor Company (governor pumps and nuts)	5.70	
Kirby Motor Trucking Company (truck service)	4.00	
Enterprise Automobile Repair Company (repairs)	4.68	
The Republic Rubber Company (rubber coats, etc.)	384.00	
Wm. Heggie (galvanized turbine inspection tube covers)	336.00	
The Kellogg-Mackay Company (pipe fitters, etc.)	302.50	
General Electric Company (oil circuit breaker, etc.)	280.74	
National Lead Company (lead in oil)	269.54	
The Texas Company (oil)	251.10	
Commercial Tire & Auto Company (solid rubber tires)	223.40	
The Kellogg-Mackay Company (black pipe, etc.)	214.64	
Amounts carried forward	$ 55,631.90	$ 45,982.41

Amounts brought forward	$ 55,631.90	$ 45,982.41
Hollow Center Packing Sales Company (lubricated flax)	210.14	
L. L. Fleig & Co., Inc. (tubing, etc.)	202.12	
Wadsworth-Howland Company (dry red lead, etc.)	197.76	
The Fred J. Ringley Company (printing)	192.00	
The Texas Company (oil, etc.)	171.37	
Wm. Heggie (centrifugal pump, dredge, etc.)	156.60	
H. M. Hooker Glass & Paint Company (Red Seal zinc in oil, etc.)	141.16	
Union Petroleum Company (gasoline)	143.91	
The Kellogg-Mackay Company (black pipe bends)	135.00	
Union Petroleum Company (gasoline)	128.13	
Joliet Forge Company (forgings)	125.00	
General Electric Company (meters)	100.56	
Westinghouse Electric & Mfg. Company (internal contractor)	120.00	
Crawford Company (eye bolts)	117.00	
H. Channon Company (flap valve drilled and faced)	99.89	
Commonwealth Edison Company (aluminum fuse wire and desk fans)	94.95	
Wadsworth-Howland Company (white Red Seal lead, etc.)	91.99	
Humphrey & Sons Company (steel pinion, etc.)	87.52	
Commonwealth Edison Company (electrical energy)	87.42	
Wm. Heggie (bushing motor, etc.)	83.70	
Monarch Electric & Wire Company (wire, etc.)	68.66	
Bentley, Murray & Co. (printing)	64.12	
American Supply Company (sanitary wipers)	62.72	
Thornton-Clancy Lumber Company (lumber)	62.40	
Riddle & Wunderle Company (paper, etc.)	49.35	
United Asbestos & Packing Company (packing, etc.)	44.86	
Humphrey & Sons Co. (shrink band)	44.85	
Stebbins Hardware Company (washers, machine bolts, etc.)	43.15	
Humphrey & Sons Company (charges for making tap)	40.45	
Clyde R. Schryver (rent of chairs for "Robert R"	40.00	
Garden City Sand Company (cement)	36.25	
Wadsworth-Howland Company (Red Seal white lead, etc.)	31.22	
National Lead Company (wire solder)	29.52	
Butler Bros. (tumblers, etc.)	29.35	
The Texas Company (oil, gasoline, etc.)	26.83	
Western Electric Company (D. & W. knife fuse and sockets)	26.64	
Edward Hines Lumber Company (lumber)	25.44	
The Chicago Evening Post Company (advertising)	24.90	
City Collector, City of Chicago (inspection charges)	24.00	
F. P. Smith Wire & Iron Works (new brass post)	22.60	
Monarch Electric & Wire Company (screw anchors, etc.)	21.60	
L. Gould & Co. (seine twine, etc.)	20.87	
Vesta Accumulator Company (battery box, etc.)	20.84	
New York Belting & Packing Company (hose coupling)	20.37	
Wm. Sorgenfrei (rent)	20.00	
American Supply Company (sanitary wipers)	19.68	
Monarch Electric & Wire Company (conduit pipe)	3.00	
Henry Stuckart (sash lifts, etc.)	2.75	
Henry Stuckart (Yale night latch)	2.75	
Stewart-Warner Speedometer Corporation (shaft)	2.43	
Addressograph Company (60 complete addresses)	2.33	
The Linde Air Products Company (oxygen)	2.20	
Burr-Vack Company (repairs to self-inker)	1.90	
S. & L. Motor Company (gear for starting, etc.)	1.09	
Times Square Auto Supply Company (tail lamp)	.75	
The Esterline Company (meter record charts)	.70	
		59,258.69
Amount carried forward		$105,241.10

Amount brought forward			$105,241.10

Miscellaneous Accounts.

L. F. King, Clerk (special roll, 39th St. Pumping Station)—			
Maintenance and Operation Account	$ 144.00		
Electrical Department	96.00		
		$ 240.00	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 166.76		
Real Estate Department	50.50		
		217.26	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 166.13		
Maintenance and Operation Account	8.94		
Law Department	1.68		
		176.75	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 50.20		
Maintenance and Operation Account	76.10		
		126.30	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 21.77		
Maintenance and Operation Account	80.35		
		102.12	
Chicago Telephone Co. (telephone service)—			
Maintenance and Operation Account	$ 12.55		
Law Department	8.85		
Law Department	.50		
Clerical Department	.10		
Police Department	.80		
General Account	100.75		
Sundry Accounts Receivable	63.30		
Electrical Department	3.45		
		190.30	
The Frederick Post Co. (blue printing)—			
Construction Account	$ 62.70		
Maintenance and Operation Account	1.39		
Law Department	1.66		
General Account	9.80		
		75.55	
Burr-Vack Co. (steel erasers, etc.)—			
Clerical Department	$ 15.75		
General Account	5.45		
		21.20	
Mosior Garage (auto for Paymaster)—			
Maintenance and Operation Account	$ 180.00		
Electrical Department	72.00		
		252.00	
			1,149.48
Grand Total			$106,390.58

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller and Paullin—Six.

Nays—None.

MISCELLANEOUS AND NEW BUSINESS.

Mr. Lawley presented the following ordinance:

Be It Ordained by the Board of Trustees of the Sanitary District of Chicago.

SECTION 1. That there be, and is hereby laid out, located and established a right-of-way for an intercepting sewer and drain and outlet, together with all necessary appurtenances thereto, the same to constitute an adjunct and addition to the Calumet-Sag Channel and of the Main Channel of The Sanitary District of Chicago, upon, under and through the following described real estate situated in the City of Chicago, to-wit:

A strip of land sixty-six (66) feet in width extending from the west line of Section twenty-seven (27), Township thirty-seven (37) north, Range fourteen (14) east of the Third Principal Meridan south of the Indian Boundary Line to the easterly boundary line of the right of way of the Chicago & Western Indiana Railroad, the center line of said strip of land being the east and west center line of said Section twenty-seven (27).

SEC. 2. That there be, and is hereby laid out, located and established the site of an intercepting sewer, sewage treatment plant, pumping station and outlet, with all necessary appurtenances thereto, the same to constitute an adjunct and addititon to the Calumet-Sag Channel and of the Main Channel of The Sanitary District of Chicago to remove from said sewage garbage, dead animals and parts thereof and other solids upon, under and through the following described real estate situated in the City of Chicago, to-wit:

That part of Section twenty-seven (27) Township thirty-seven (37) north, Range fourteen (14) east of the Third Principal Meridian south of the Indian Boundary Line lying north of a line thirty-three (33) feet south of and parallel to the east and west center line of said Section twenty-seven (27), east of the Chicago and Western Indiana Railroad right of way and east and south of the property of the American Malting Company and south and west of the Michigan Central Railroad property.

SEC. 3. Attached hereto and made a part of this ordinance is a plat or map entitled "Ordinance Map for Right of Way of an Intercepting Sewer and Drain and Site of Intercepting Sewer Sewage Treatment Plant and Outlet, the same to be Adjuncts and Additions to the Calumet-Sag Channel and the Main Channel of The Sanitary District of Chicago August 14, 1919, on which said plat or map is indicated in red said right-of-way and site.

SEC. 4. That the construction of the works, structures and improvements above described is hereby provided for, and there shall be constructed, maintained and operated upon, under and through the right of way described in Section 1 of this ordinance a sewer and drain, together with all necessary appurtenances thereto, the same to constitute an adjunct and addition to the Calumet-Sag Channel and of the Main Channel of The Sanitary District of Chicago and there shall be constructed, maintained and operated upon, under and through the real estate described in Section 2 of this ordinance an intercepting sewer, sewage treatment plant and outlet, with all necessary appurtenances thereto, the same to constitute

an adjunct and addition to the Calumet-Sag Channel and the Main Channel of The Sanitary District of Chicago.

SEC. 5. That the construction, maintenance and operation of the works, structures and improvements described in this ordinance is necessary in order to remove and take from the sewage discharged into the Calumet-Sag Channel and the Main Channel of The Sanitary District of Chicago from said works, structures and improvements, all garbage, dead animals and parts thereof and other solids, and in order to keep and maintain the water of the said Calumet-Sag Channel and of the Main Channel and of the Desplaines and Illinois Rivers in such condition that said water shall be neither offensive or injurious to the health of any of the people of the State of Illinois.

SEC. 6. That the Committee on Finance of the Board of Trustees of The Sanitary District of Chicago is hereby authorized and directed to negotiate for, and to purchase for and on behalf of The Sanitary District of Chicago, upon such terms as said Committee on Finance may deem just and reasonable, not to exceed, however, the fair cash market price of the same, the pieces or parcels of land described in Sections 1 and 2 of this ordinance or any interest or right therein or pertaining thereto, and in the event that said Committee on Finance is unable to agree with any of the owners or parties in interest for, or in respect to, the compensation to be paid to any of said owners or parties in interest for any of said pieces or parcels of land, or for any interest or right therein, or pertaining thereto, then the Attorney of the District shall institute proceedings on behalf of The Sanitary District of Chicago in such court as he may deem proper to acquire said pieces or parcels of land, or any interest or right therein, or pertaining thereto, under and by virtue of the Eminent Domain Laws of the State of Illinois.

SEC. 7. This ordinance shall be in force and become effective from and after its passage.

JAS. H. LAWLEY.

Mr. Lawley moved that the ordinance be passed.

Mr. Nance moved as a substitute for the ordinance that the Chicago Real Estate Board be directed to make a valuation of the property outlined in said ordinance, and to report back to the Board at the very earliest moment.

Mr. Lawley moved that the substitute of Mr. Nance be laid on the table.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller and Paullin—Six.

Nays—Mr. Nance—One.

The question recurring on the motion to pass said ordinance, was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Mueller and Paullin—Six.

Nays—Mr. Nance—One.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

L. E. King

Clerk.

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NOV 10 1919

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, AUGUST 21, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel took the Chair, and the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley and Paullin—Six.

Absent—Messrs. Littler, Mueller and Nance—Three.

Bids.

The Clerk opened and read the bids received for paving the Blue Island and Riverdale road, as shown in the following schedule of bids on page 1112A.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of July, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR JULY, 1919.

Receipts.

Balance on hand at date of last report		$ 238,806.60
Electrical Department (Working Capital)	$ 196,504.67	
Land Revenue	9,456.40	
Water Service	1,050.00	
City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919	2,837,155.00	
County Collector	750,000.00	
Collector, Town of Calumet	11,678.93	
Interest and Premium on City of Chicago Judgment Funding Serial 4% Gold Bonds dated July 1, 1919	5,000.10	
Getz, Mitchell & Co.	1,236.70	
City of Chicago Judgment Account	1,056.99	
Interest and Premium on Bonds	922.50	
Police Department	65.00	
Law Department	62.50	
Calumet-Sag Channel Construction	23.33	
Sanitary Improvement and Sewage and Special Investigation and Experiments Construction	10.00	
Sanitary Improvements and Sewage and Special Investigation and Experiment, Maintenance and Operation	1.26	
Interest on Deposits (Geo. M. Reynolds, Treasurer)	502.64	
Interest on Deposits (Clerk's Emergency Fund)	28.88	
Total cash received for month		3,814,754.90
		$4,053,561.50

Expenditures.

Engineering Department (Construction Account)	$ 249,153.02	
Engineering Department (Maintenance and Operation Account)	16,772.57	
Illinois and Michigan Canal and Illinois River Conditions Department	1,120.05	
Law Department	12,245.75	
Cost of Law Cases	400.00	
Clerical Department	1,790.25	
Treasury Department	237.16	
Real Estate Department	762.07	
Police Department	3,127.94	
General Account	11,642.01	
Electrical Department	41,269.39	
Bond Account	150,000.00	
Interest and Premium on Bonds	84,060.00	
Anticipation Tax Warrants	3,000,000.00	
Interest on Anticipation Tax Warrants	112,500.00	
Total cash disbursed		3,685,080.21
Balance on hand this date, as per schedule		368,481.29
		$4,053,561.50

G. M. Reynolds,
Treasurer.

J. R. Washburn,
Asst. Treasurer.

Chicago, August 21, 1919.

AUGUST 21, 1919.

No. of Item.	Description of Item.	5. J. Forschner Contracting Co.		6. Marquette Construction Company.		7. Wm. J. Brady.	
		Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.
1.	Macadam Pavement	0	$24,200.00	$1.73	$19,030.00	$2.66	$29,260.00
2.	Excavation	0	6,750.00	1.80	8,100.00	1.14	5,130.00
3.	12-Inch Vitrified Tile	0	100.00	2.50	125.00	3.20	160.00
	Total Amount ..		$31,050.00		$27,255.00		$34,550.00
			5.		4.		6.

THE SANITARY DISTRICT OF CHICAGO

TABULATION OF BIDS RECEIVED FOR PAVING THE BLUE ISLAND AND RIVERDALE ROAD, AUGUST 21, 1919.

No. of Item.	Description of Item.	Estimated Quantities.	1. Calumet Coal & Teaming Co.		2. Ready & Callaghan Coal Co.		3. James A. Sackley Company.		4. W. A. Kenefick.		5. T. J. Forschner Contracting Co.		6. Marquette Construction Company.		7. Wm. J. Brady.	
			Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.	Unit Price.	Amount.
1.	Macadam Pavement	11,000 sq. yds.	$2.55	$28,050.00	$1.90	$20,900.00	$1.65	$18,150.00	$1.94	$21,340.00	$2.20	$24,200.00	$1.73	$19,030.00	$2.66	$29,260.00
2.	Excavation	4,500 cu. yds.	1.85	8,325.00	.85	3,825.00	1.10	4,950.00	.87	3,915.00	1.50	6,750.00	1.80	8,100.00	1.14	5,130.00
3.	12-Inch Vitrified Tile Pipe	50 lin. ft.	2.00	100.00	1.50	75.00	2.00	100.00	2.00	100.00	2.00	100.00	2.50	125.00	3.20	160.00
	Total Amount			$36,475.00		$24,800.00		$23,200.00		$25,355.00		$31,050.00		$27,255.00		$34,550.00
				7.		2.		1.		3.		5.		4.		6.

The Clerk transmitted receipt of the Treasurer dated August 15, 1919, for $20,000.00 from John McGillen, retiring Clerk of the Sanitary District, being the return of the emergency fund of the Clerk created by order of the Board December 13, 1912, which said amount has been deposited to the credit of the Sanitary District, G. M. Reynolds, Treasurer, which was ordered published and filed, as follows:

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Herewith is transmitted receipt of the Treasurer, dated August 15th instant, for twenty thousand dollars ($20,000.00) in favor of John McGillen, retiring Clerk of the District, same being in return of Clerk's Emergency Fund created by order of the Board of Trustees December 13, 1912.

Said amount has been deposited to the credit of The Sanitary District of Chicago, G. M. Reynolds, Treasurer.

Respectfully submitted,

L. F. KING,
Clerk.

CHICAGO, August 15, 1919.

Received of John McGillen, retiring Clerk of The Sanitary District of Chicago, twenty thousand ($20,000.00) dollars, same being amount of Clerk's Emergency Fund created by order of the Board of Trustees of The Sanitary District of Chicago December 13, 1912 (page 1471 of the Proceedings).

G. M. REYNOLDS,
Treasurer.
J. R. WASHBURN,

REPORTS OF COMMITTEES.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, August 21, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that coal screenings when stored in piles are likely to catch fire spontaneously and it is necessary to have on hand at the Thirty-ninth Street and Lawrence Avenue Pumping Stations during the coming winter a supply of coal which can be used in case screenings cannot be delivered on account of strikes, delays in shipments or other contingencies, and he requests that he be authorized to prepare specifications for furnishing said coal on a British thermal unit basis.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to prepare specifications for the purchase of lump coal to supply the 39th Street and Lawrence Avenue Pumping Stations during the coming winter to be used for the purposes stated on the British thermal unit basis and that the Clerk advertise for bids therefor in accordance with the specifications to be prepared by the Chief Engineer.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Finance.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley and Paullin—Six.

Nays—None.

Mr. Clark presented the following re-

port from the Committee on Engineering:

CHICAGO, August 21, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on August 7, 1919 (page 961 of the Proceedings) authorized the Chief Engineer to prepare plans and specifications for constructing a macadam pavement on the Blue Island and Riverdale Road between Halsted street and Wentworth avenue and to present the same to your Committee for its approval.

Your Committee further reports that it has considered plans and specifications for said macadam pavement prepared by the Chief Engineer, has approved same and recommends the passage of the following order:

Ordered, That the plans and specifications prepared by the Chief Engineer for doing the work above specified be, and the same are hereby approved.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley and Paullin—Six.

Nays—None.

Real Estate Development.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, August 21, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Real Estate Development transmits herewith forms of leases to be entered into between the Sanitary District and the following parties:

1. Gust Blasing of lot 223 in Sanitary District Trustees' Subdivision of the right of way from north and south center line of Section 30, Township 39 North, Range 14 East of the 3rd Principal meridian to the Will County line, containing 25.80 acres of land more or less, of which ten acres are available for pasture from July 1, 1919 to June 30, 1922, at an annual rental of $25.00.

2. L. I. Conrad of lots 121, 123, 125, 127, 129 and 131 of said Trustees' Subdivision (except five acres of said lot 131 adjacent to the Canal under lease to Joseph Brabec) containing 105.23 acres of land more or less, from Sept. 1, 1919, to Aug. 31, 1922, at an annual rental of $263.00.

3. Francis F. Lukas of lots 167, 169, 171, 175, 178, 181, 183, and 10 acres of lot 186 of said Trustees' Subdivision, containing 71.9 acres of land more or less, from June 1, 1919 to May 31, 1922, at an annual rental of $150.00.

4. E. A. Preller, tracts 21A, 22A and 25A, part of the right of way of the Calumet-Sag Channel containing seven acres of land from August 1, 1919, to July 31, 1922, at an annual rental of $35.00.

5. Mike Chejlava, tracts 145, 146, 150, 151 and 155 of the right of way of the Calumet-Sag Channel containing about 9 acres of arable land and 77 acres of poor pasture land from January 1, 1919 to December 31, 1921, at an annual rental of $150.00.

Your Committee reports that said leases are in the usual form, and provide that the Sanitary District may

terminate the same by giving 90 days' notice in writing to said tenants of its intention so to do, in the event that it desires to use said land for any of its corporate purposes.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby, authorized and directed to execute, in duplicate the forms of leases herewith submitted, the same having been executed by said lessees.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
WM. J. HEALY,
WALLACE G. CLARK,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley and Paullin—Six.

Nays—None.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Col. W. V. Judson.

WAR DEPARTMENT
UNITED STATES ENGINEERS OFFICE
508 Federal Bldg.,
Chicago, Ill.

August 15, 1919.

From the District Engineer to Mr. C. Arch Williams, 910 S. Michigan Ave., Chicago, Ill.

DEAR SIR—Receipt is acknowledged of your letter of August 14, 1919, calling to my attention certain details in connection with the acquisition of land by the Sanitary District. The same will be given due consideration, and I thank you for advising me so fully. This is very gratifying.

Very respectfully,
W. V. JUDSON,
Colonel, Corps of Engineers.

Referred to the Committee on Engineering.

Committee of the Whole.

Mr. Clark moved that the Board resolve itself into the Committee of the Whole to receive a verbal report of the Attorney in reference to the employment of Messrs. C. A. Williams and Ralph Peck to represent the Sanitary District in regard to the collection of delinquent taxes.

The motion prevailed and the Board resolved itself into the Committee of the Whole with Mr. Healy in the Chair.

The Committee of the Whole rose and the Board resumed business.

The Chairman reported that the Committee had considered the recommendations of the Attorney of the Board that Messrs. C. A. Williams and Ralph Peck be employed to represent the Sanitary District in regard to the collection of delinquent taxes, the compensation to be paid Messrs. Williams and Peck to be 20% of the amount of delinquent taxes collected. A motion was carried that the entire subject matter be referred to the Committee on Judiciary with full power to act.

Mr. Healy moved that the report of the Committee be adopted.

The motion prevailed.

ADJOURNMENT.

Mr. Carr moved that the Board adjourn.

The motion prevailed.

L. E. King
Clerk.

628.0977

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

TUESDAY, SEPTEMBER 4, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel presiding, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Absent—Mr. Paullin—One.

Bids.

The Clerk opened and read bids received for furnishing lump coal for the 39th Street Pumping Station as shown on page 1118 of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk read a report of Attorney C. Arch Williams relative to the depositing of $25,000 worth of bonds of the

THE SANITARY DISTRICT OF CHICAGO

BIDS FOR FURNISHING LUMP COAL FOR 39TH ST. PUMPING STATION

In Order of Magnitude—Lowest Bid First

Bids Opened September 4, 1919

In Order Received	In Order of Magnitude	1 Name and Address of Bidder	2 Amount of Deposit	3 Name of Fuel	4 Per Cent of Moisture as Delivered	5 Per Cent of Ash in Dry Coal	6 B. T. U. per Pound of Dry Coal	7 Price per Ton Delivered on Cars	8 * Net B. T. U. for One Cent
1	1	East Coal Co., Chicago, Ill..	$200.00	Diamond Mine, Perry. Co., Ill...	8.4	13.0	12,700	$5.51	41,253

The lowest bid is the one furnishing the greatest number of net British Thermal Units for one cent.

*This is computed from figures in columns 4, 5, 6 and 7, furnished by the bidder as per rule in specifications.

$$\text{Net B. T. U. for one cent} = \frac{2000 \times \text{B. T. U. per pound dry coal} \times (100 \text{ per cent, less per cent of moisture as delivered})}{\text{Price per ton} + (1 \text{ cent} \times \text{number of per cent of ash in dry coal})}$$

Second Liberty Loan with the Treasurer, which was ordered published and filed, as follows:

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Pursuant to directions of the Committee on Finance at a recent meeting, I prepared, in triplicate, a receipt to be signed by the Treasurer of the Sanitary District for Second Liberty Loan Bonds of the Value of $25,000.00, without coupons attached, which bonds have been held by Mr. John McGillen, former Clerk of the District, pursuant to an escrow agreement between the District and the T. J. Forschner Contracting Company, dated June 20, 1918 (page 1015 of the Proceedings) in accordance with an order of the Board of Trustees passed August 8, 1918 (page 892 of the Proceedings).

These bonds have been delivered to the Treasurer of the District, who has signed a receipt therefor in triplicate, the original of which is attached hereto and should be filed with the Clerk. The duplicate copy is held by Mr. John McGillen and the triplicate copy is to be delivered to the T. J. Forschner Contracting Company.

Respectfully submitted,
C. ARCH WILLIAMS,
Attorney.

CHICAGO, August 28, 1919.

RECEIPT FOR LIBERTY BONDS.
Forschner Contract.

Received from Mr. John McGillen five Second Liberty Loan Bonds each for One Thousand Dollars ($1,000.00) numbered respectively 791342, 791343, 791344, 791345, 791346, and two Liberty Loan Bonds each for the sum of Ten Thousand Dollars ($10,000.00) numbered respectively 34142 and 34143 without coupons attached to any of said bonds, the four coupons attached to each bond, the last of which matured in November, 1919, having been already detached, which bonds were delivered to and held by said John McGillen as Clerk of the Sanitary District of Chicago under an escrow agreement between said District and the T. J. Forschner Contracting Company dated June 20, 1918 (Proceedings Page 1015) in accordance with an order of the Board of Trustees passed on August 8, 1918 (Proceedings Page 892).

This receipt is executed by the undersigned in triplicate, one to be delivered to the Board of Trustees of the Sanitary District, one to Mr. John McGillen, and one to said Forschner Contracting Company.

G. M. REYNOLDS,
Treasurer.
By J. R. WASHBURN,
Assistant Treasurer.

CHICAGO, September 4, 1919.

The Clerk presented his report of purchases made during the month of June, 1919, which was ordered published and filed, as follows:

To The Honorable The Committee On Finance.

GENTLEMEN—I submit herewith statements of all purchases made by me under authority of The Board of Trustees for the month of June, 1919.

Trusting that same will meet with your approval, I remain,

Yours very truly,
L. F. KING,
Purchasing Division.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, August 28, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to report that the semiannual interest on the sixteenth issue of

bonds of the Sanitary District, amounting to the sum of ten thousand, eight hundred eighty ($10,880.00) dollars, will fall due September 15, 1919 and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to draw a warrant payable to the order of the Treasurer of The Sanitary District of Chicago, for the sum of ten thousand, eight hundred eighty ($10,880.00) dollars, to pay the semiannual interest due September 15, 1919, on five hundred forty-four thousnad ($544,000.00) dollars of the sixteenth issue of bonds at 4 per cent per annum.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance.

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a request from the Chief Engineer to make a transfer of funds from an unexpended account to other accounts in order to provide funds for the payment of expenditures for which no appropriations were made.

Your Committee having considered the matter, is of the opinion that said requests should be granted, and, therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make the following transfers in appropriations for the year 1919 in accordance with the request of the Chief Engineer attached hereto.

Department of Engineering.

From Account No. 64-J-6-Main Channel Storage Basin.....$10,256.57

To the following accounts:

No. 641-H-29 Byrne Bros. Dredging and Engineering Company, claim Section 9, Calumet-Sag Channel $9,256.57

No. 641-H-29a Calumet-Sag Channel, Section 9 ..... 1,000.00

Total $10,256.57

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT A. MUELLER,
CHAS. H. SERGEL,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, September 4, 1919.

To the Honorable, the President, and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and fo rmiscellaneous services and supplies, and recommends that they be approved and ordered paid.

General Payroll for Last Half of August, 1919.

L. F. King Clerk (general payroll)		$ 32,058.55

Construction Account.

Nash Bros. (work on Desplaines Intercepting Sewer)	$ 58,324.88	
T. J. Forschner Contracting Company (work on Calumet Sewage Pumping Station)	46,783.07	
Leyden-Ortscifen Company (work on Desplaines River Sewage Treatment Works)	23,229.40	
Nash-Dowdle Company (work on Evanston Sewage Pumping Station)	22,190.00	
Byrne Bros. Dredging & Engineering Company (labor and material, Calumet-Sag Channel)	16,256.57	
James O. Heyworth (work on Section 1, Calumet-Sag Channel)	14,804.13	
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	13,229.65	
A. Guthrie & Co., Inc. (labor and material, Division St. bridge, Calumet-Sag Channel)	36.87	
A. Guthrie & Co., Inc. (labor, Division St. bridge, Calumet-Sag Channel)	15.87	
E. A. Hanrahan (labor cleaning outfall ditches, Calumet-Sag Channel)	422.00	
E. A. Hanrahan (hauling tile pipe, Calumet-Sag Channel)	46.00	
Ayers & France (test borings)	262.50	
The Globe Wernicke Company (supplies)	46.88	
Engineering News-Record (insertion of advertisement)	37.35	
Engineering & Contracting (advertising)	33.00	
Ready & Callaghan Coal Company (labor and material in the construction of sprinkling filter and appurtenances in the Village of Morton Grove)	2,446.76	
Baltimore & Ohio Chicago Terminal R. R. Company (labor and material B. & O. bridge, Calumet-Sag Channel)	545.58	
Commonwealth Edison Company (electric light)	.50	
Public Service Company of Northern Illinois (electric light)	.75	
Chicago Towel Company (towel service)	1.25	
John E. Burns Lumber Company (lumber)	1.61	
Standard Oil Company (oil)	1.62	
Thornton-Claney Lumber Company (lumber)	3.52	
Adam Schillo Lumber Company (lumber)	6.76	
The Bristol Company (rubber diaphrams)	6.86	
Josephine Eck (rental)	8.00	
Keuffel & Esser Company (scales)	2.78	
Keuffel & Esser Company (tapes)	9.22	
United States Rubber Company (hip boots)	11.50	
Jos. T. Ryerson & Son (steel bars)	15.46	
Geo. B. Carpenter & Co. (lanterns)	1.71	
Geo. B. Carpenter & Co. (wire cutters, etc.)	5.59	
Geo. B. Carpenter & Co. (machine bolts, etc.)	18.28	
New York Belting & Packing Company (molded and braided hose)	20.00	
Augusta Schwartz (rental)	22.00	
H. Channon Company (wheelbarrows)	28.00	
Amounts carried forward	$198,875.92	$ 32,058.55

Amounts brought forward	$198,875.92	$ 32,058.55
Evening American Publishing Company (advertising)	33.75	
Consumers Company (stone, sand and cement)	48.75	
E. A. Hanrahan (filling east side drainage ditch, Tinley Creek)	478.00	
E. A. Hanrahan (filling west side drainage ditch, Tinley Creek)	498.00	
General Filteration Company (filtros plates)	187.48	
L. F. King, Clerk (recording easement)	3.30	
L. F. King, Clerk (expenses of employe)	5.54	
		200,130.82

Maintenance and Operation Account.

L. F. King, Clerk (freight on fuel paid I. C. R. R., 39th St. Pumping Station)	$ 104.03	
Buissono Bros. (rebabbitted and bored quarter box, 39th St. Pumping Station)	182.76	
Motor Mica Products Company (motor mica grease, 39th St. Pumping Station)	44.34	
United Asbestos & Packing Company (glasses and gaskets, 39th St. Pumping Station)	33.07	
The Lunkenheimer Company (low water alarms, 39th St. Pumping Station)	25.20	
Stebbins Hardware Company (soldering iron and solder, 39th St. Pumping Station)	21.95	
H. Channon Company (winch head, 39th St. Pumping Station)	20.00	
Hinckley & Schmitt, Inc. (drinking water, 39th St. Pumping Station)	17.00	
Chicago Chemical & Polish Company (metal polish, 39th St. Pumping Station)	7.35	
Devoe & Raynolds (yellow ochre in oil, 39th St. Pumping Station)	4.86	
David G. Murray (teaming, Lawrence Ave. Pumping Station)	318.40	
H. Stanley Hart (services of boat and operator, Lawrence Ave. Pumping Station)	176.40	
Jos. Sandeen (teaming, Lawrence Ave. Pumping Station)	159.20	
Wm. Blanninn (teaming charges, Lawrence Ave. Pumping Station)	64.00	
Albert Hancock & Co. (supplies, Lawrence Ave. Pumping Station)	50.10	
Thos. F. Ryan Company (lumber, Lawrence Ave. Pumping Station)	47.81	
The Fred J. Ringley Company (printing, Lawrence Ave. Pumping Station)	47.50	
The Fred J. Ringley Company (printing, Lawrence Ave. Pumping Station)	44.50	
Kellogg-Mackay Company (repairs, Lawrence Ave. Pumping Station)	32.00	
Sinclair Refining Company (cordymo oil, Lawrence Ave. Pumping Station)	30.19	
Sweet-Wallach Company (shutter and fittings, Lawrence Ave. Pumping Station)	28.80	
Louis J. Wohnlich (repairs, Lawrence Ave. Pumping Station)	25.34	
Wm. O'Connell (supplies, Lawrence Ave. Pumping Station)	19.15	
Burr-Vack Company (supplies, Lawrence Ave. Pumping Station)	19.10	
Wm O'Connell ,material and labor, Lawrence Ave. Pumping Station)	12.95	
Amounts carried forward	$ 1,536.00	$232,189.29

Amounts brought forward	$ 1,536.00	$232,189.29
Evanston Building Material Company (rods, Lawrence Ave. Pumping Station)	12.24	
H. Channon Company (Boughton mower, Lawrence Ave. Pumping Station)	11.50	
Keuffel & Esser Company (gross section cloth, Lawrence Ave. Pumping Station)	10.20	
Omslaer's Evanston Express (express charges, Lawrence Ave. Pumping Station)	7.35	
The Fred J. Ringley Company (printing, Lawrence Ave. Pumping Station)	7.00	
Chicago Fire Brick Company (Davis Crown squares, Lawrence Ave. Pumping Station)	2.98	
Burr-Vack Company (rubber stamps and dater, Lawrence Ave. Pumping Station)	2.60	
The Thos. F. Ryan Company (lumber, Lawrence Ave. Pumping Station)	2.41	
William Heggie (drilling and counter-sinking bar, Lawrence Ave. Pumping Station)	2.40	
Miller Hardware Company (cash cord and pulley, Lawrence Ave. Pumping Station)	1.95	
Parker's Towel Supply Compnay (towel service, Lawrence Ave. Pumping Station)	1.60	
American Job Book Bindery (binding journal, Lawrence Ave. Pumping Station)	1.25	
Keuffel & Esser Company (tape repaired, Lawrence Ave. Pumping Station)	.40	
Green Engineering Company (chain skid)	289.08	
Green Engineering Company (chain skid)	289.05	
Green Engineering Company (repairs)	165.81	
Geo E. Corbett Boiler & Tank Company (material and labor)	122.50	
Green Engineering Company (repairs)	107.60	
Kellogg-Mackay Company (black pipe)	50.72	
Anderson Oil Company (engine oil)	50.32	
Green Engineering Company (repairs and express charges)	41.45	
Green Engineering Company (repairs)	34.93	
Illinois Engineering Company (valve repaired)....)	23.00	
Stebbins Hardware Company (cut washers, etc.)	19.93	
American Supply Company (sanitary wipers)	18.68	
Kirby Motor Trucking Company (trucking service)	18.59	
Kellogg-Mackay Company (pipe fittings)	16.28	
Kirby Motor Trucking Company (truck service)	15.84	
Green Engineering Company (pipe roll stubs)	14.82	
Stebbins Hardware Company (flashlight, etc.)	11.13	
Link Belt Company (repairs)	8.97	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Hinckley & Schmitt, Inc. (drinking water)	8.50	
Geo. B. Carpenter & Co. (paper mill hooks)	2.05	
United Asbestos & Packing Company (glass washers)	.90	
L. F. King, Clerk (railroad tickets)	42.88	
L. F. King, Clerk (postage stamps)	200.00	
The Texas Company (gasoline)	26.34	
North Shore Hardware Company (hardware supplies)	29.70	
The Fred J. Ringley Company (voucher blanks)	30.00	
Bentley-Murray & Co. (report blanks)	35.00	
Crane Company (valves)	42.84	
Weil Bros. (pipe fittings, etc.)	52.95	
Argo Summit Lumber Company (lumber)	76.73	
Wm. O'Connell (hardware supplies)	78.77	
Wadsworth-Howland Company (paint and oil)	35.66	
Amounts carried forward	$ 3,569.40	$232,189.29

Amounts brought forward	$ 3,569.40	$232,189.29
Wadsworth-Howland Company (paint and oil)	88.97	
A. C. Wilkey (launch hire and expenses)	114.44	
Mears-Slayton Lumber Company (lumber)	56.02	
Mears-Slayton Lumber Company (lumber)	130.09	
Thornton-Claney Lumber Company (lumber)	150.44	
Thos. F. Ryan Company (lumber)	115.50	
Thos. F. Ryan Company (lumber)	126.71	
Thos. F. Ryan Compnay (lumber)	141.50	
Thos. F. Ryan Company (lumber)	286.05	
Heath & Milligan Mfg. Company (paint)	142.50	
Nash-Dowdie Company (repairing box culvert)	143.12	
David G. Murray (teaming charges)	254.72	
Consolidated Company (cement)	300.30	
Consolidated Company (cement)	300.30	
McGrath Sand & Gravel Company (sand)	61.15	
McGrath Sand & Gravel Company (sand)	65.46	
McGrath Sand & Gravel Company (sand)	216.17	
McGrath Sand & Gravel Company (sand)	246.84	
McGrath Sand & Gravel Company (sand)	258.91	
McGrath Sand & Gravel Company (sand)	354.20	
McGrath Sand & Gravel Company (sand)	399.36	
McGrath Sand & Gravel Company (sand)	437.66	
L. F. King, Clerk (special roll, 39th St. Pumping Station)	264.00	
L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	202.00	
L. F. King, Clerk (demurrage charges and freight)	72.67	
Bissell Laundry (towel service, Lawrence Ave. Pumping Station)	1.90	
Stebbins Hardware Company (lanterns, Lawrence Ave. Pumping Station)	2.60	
Stebbins Hardware Company (lanterns, Lawrence Ave. Pumping Station)	2.60	
Setbbins Hardware Company (graphite, etc., Lawrence Ave. Pumping Station)	6.10	
Whitney & Ford (cutting pipe, Lawrence Ave. Pumping Station)	8.24	
Fuller-Morrison Company (chloroform, etc., Lawrence Ave. Pumping Station)	8.73	
Hydrox Company (distilled water, Lawrence Ave. Pumping Station)	3.50	
Hydrox Company (distilled water, Lawrence Ave. Pumping Station)	11.00	
Parker's Towel Supply Company (towel service, Lawrence Ave. Pumping Station)	11.20	
Kirby Motor Trucking Company (motor truck service, Lawrence Ave. Pumping Station)	14.06	
Hinckley & Schmitt, Inc. (distilled water, Lawrence Ave. Pumping Station)	17.00	
The Kellogg-Mackay Company (pipe fittings, Lawrence Ave. Pumping Station)	18.20	
H. Channon Company (tools, Lawrence Ave. Pumping Station)	22.88	
Crane Company (pipe fittings, Lawrence Ave. Pumping Station)	32.96	
A. Daigger Company (steam bath, Lawrenve Ave. Pumping Station)	32.00	
A. Daigger Company (lavatory supplies, Lawrence Ave. Pumping Station)	43.35	
Crane Company (pipe, Lawrence Ave. Pumping Station)	68.00	
Amounts carried forward	$ 8,802.80	$232,189.29

Amounts brought forward	$ 8,802.80	$232,189.29
Thornton-Clancy Lumber Company (lumber, Lawrence Ave. Pumping Station)	88.94	
The Wm. H. Reid Company (cylinder oil, Lawrence Ave. Pumping Station)	110.66	
United Asbestos & Packing Company (asbestos gaskets, etc., Lawrence Ave. Pumping Station)	120.49	
Gulick-Henderson Company (analysis of coal, Lawrence Ave. Pumping Station)	137.00	
The Kellogg-Mackay Company (pipe fittings, Lawrence Ave. Pumping Station)	139.39	
H. W. Johns-Manville Company (pipe covering, Lawrence Ave. Pumping Station)	169.65	
Kenwood Trucking & Teaming Company (hauling ashes, Lawrence Ave. Pumping Station)	180.00	
Golden-Anderson Valve Specialty Company (valves, Lawrence Ave. Pumping Station)	243.00	
Golden-Anderson Valve Specialty Company (valves, Lawrence Ave. Pumping Station)	486.00	
L. F. King, Clrk (demurrage charges, Lawrence Ave. Pumping Station)	2.00	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	160.74	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	180.88	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	218.44	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	235.43	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Stattion)	262.80	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	297.30	
L. F. King, Clerk (freight on coal, Lawrence Ave. Pumping Station)	356.30	
Peoples Gas Light & Coke Company (gas bill, Lawrence Ave. Pumping Station)	.65	
Kirby Motor Trucking Company (motor truck service, Lawrence Ave. Pumping Station)	4.33	
Parker's Towel Supply Company (towel service, Lawrence Ave. Pumping Station)	5.00	
Green Engineering Company (door tile liners, Lawrence Ave. Pumping Station)	6.97	
Stebbins Hardware Company (blades and emery cloth, Lawrence Ave. Pumping Station)	9.71	
Acme Wood & Coal Company (slabs, Lawrence Ave. Pumping Station)	10.50	
Trumbull Waste Mfg. Company (waste, Lawrence Ave. Pumping Station)	16.66	
Hinckley & Schmitt, Inc. (distilled water, Lawrence Ave. Pumping Station)	25.50	
Lynch-Clarissey Company (boiler compound, Lawrence Ave. Pumping Station)	42.00	
United Asbestos & Packing Company (steel braid, etc., Lawrence Ave. Pumping Station)	43.53	
North Shore Ash Company (hauling cinders, Lawrence Ave. Pumping Station)	115.20	
Sullivan Oil Company (oil, Lawrence Ave. Pumping Station)	116.21	
Norris-Ward Coal Company (coal, Lawrence Ave. Pumping Station)	190.56	
Amounts carried forward	$ 12,778.64	$232,189.29

Amounts brought forward	$ 12,778.64	$232,189.29
Diamond Power Specialty Company (Diamond blower, Lawrence Ave. Pumping Station)	484.54	
Parker's Towel Supply Company (towel service)	1.00	
Marshall Field & Co. (photographic supplies)	1.95	
Chicago Fire Brick Company (fire brick)	2.98	
Kirby Motor Trucking Company (truck servcie)	3.00	
Geo. B. Carpenter & Co. (pump)	3.30	
H. Channon Company (rope, etc.)	4.11	
Public Service Company of Northern Illinois (ignitor battery)	1.80	
Public Service Company of Northern Illinois (electric service)	4.50	
Stebbins Hardware Company (bolts and washers)	3.25	
Stebbins Hardware Company (pliers, etc.)	3.30	
Stebbins Hardware Company (bolts, etc.)	4.89	
A. Milton Cox, M. D. (professional services)	5.00	
Burr-Vack Company (felt pad)	10.00	
Geo. B. Carpenter & Co. (rope)	10.37	
A. Daigger Company (lavatory supplies)	16.82	
Miller Hardware Company (hardware supplies)	17.16	
Scully Steel & Iron Company (iron and steel)	17.57	
Anderson Oil Company (oil)	21.00	
C. F. Peterson (express service)	21.00	
The Barrett Company (freight charges)	.81	
The Barrett Company (freight charges)	.83	
The Barrett Company (creosote oil)	22.05	
The Barrett Company (creosote oil)	22.50	
Henry Stuckart (axes and rope)	23.40	
Sweet-Wallach Company (photographic supplies)	14.94	
Sweet Wallach & Co. (photographic supplies)	23.53	
L. F. King, Clerk (payroll repairs to walls and repairs to Main Channel Bridges, etc.)	6,533.29	
G. J. Johnsosn (teaming)	26.19	
		20,083.72

I. & M. Canal & ILLinois River Conditions Departments

E. H. Heilborn (expenses of employes)	$ 103.96	
Eugene Dietzgen Company (plane table outfits)	450.00	
W. H. Salisbury & Co. Inc. (rubber coats, boots, etc.)	288.44	
American Blue Print Paper Company (blue prints)	169.08	
Sweet Wallach & Co. (photographic supplies)	119.85	
Cecil Hotel (boarding and lodging for field party)	73.50	
Tazewell Hotel Company (lodging for field party)	46.00	
Frank J. Murphy (meals for field party)	39.45	
B. L. Battin (meals for field party)	36.60	
The Harrison (lodging for field party)	34.00	
Standard Oil Company (gasoline and oil)	28.34	
Cameron Amberg & Co. (carbon paper, etc.)	26.89	
Kables Restaurant (meals for field party)	25.20	
Peoples Telephone Company (telephone service)	19.45	
J. R. Paskell (lodging for field party)	16.50	
Standard Oil Company (polarine oil)	16.07	
G. Craner Dry Plate Company (photographic plates)	15.89	
Standard Oil Company (gasoline)	15.21	
Sweet Wallach Company (photographic supplies)	13.38	
Public Service Company of Northern Illinois (electrical energy)	6.74	
Fred J. Ringley Company (printing)	5.00	
Kaufmann & Fabry Company (engineering prints)	5.00	
W. H. Ratcliff (cartage)	1.25	
Amounts carried forward	$ 1,555.80	$252,273.01

Amounts brought forward	$ 1,555.80	$252,273.01
G. Cramer Dry Plate Company (express charges)	.71	
Chilus Webster (repairing leak in boat)	6.00	
Hotel Atlantic (hotel service)	5.70	
Hotel Atlantic (hotel service)	56.23	
		1,624.44
Law Department.		
American Rug & Carpet Company (carpet)	$ 210.00	
Kaufmann & Fabry Company (solar prints, etc)	198.00	
Michelin Tire Company (tire)	15.92	
American Electric Company (clamp, etc.)	9.17	
The Frank Shepard Company (subscription)	7.00	
Callaghan & Co. (negligence & compensation cases annotated, volume No. 17)	6.50	
Underwood Typewriter Company (repairs)	.75	
Burr Vack Company (paper)	2.00	
Callaghan & Co. (U. S. reports)	3.00	
Jas. D. Ahern Company (lettering windows)	7.00	
American Law Book Company (books)	8.00	
Burr Vack Company (office supplies)	4.00	
Burr Vack Company (office supplies)	10.75	
West Publishing Company (subscriptions for books)	11.50	
C. C. Hines Sons Company (subscription to Law Journal)	15.00	
The Globe Wernicke Company (book cases)	38.67	
Alex. H. Revell & Co. (office chairs)	48.00	
Berkshire Company (paper)	23.00	
Berkshire Company (paper)	65.20	
Standard Oil Company (new partitions and repairs)	174.62	
L. F. King, Clerk (expense of employe)	12.81	
L. F. King, Clerk (expense of automobile)	25.00	
		895.89
Clerical Department.		
Burr Vack Company (bill heads)	$ 1.00	
Burr Vack Company (exchange on file)	1.00	
The Fred J. Ringley Company (letterheads and cass meo. slips)	84.00	
The Fred J. Ringley Company (white envelopes and printing)	117.80	
L. F. King, Clerk (expense of employes)	33.77	
Underwood Typewriter Company (repairs)	.75	
L. F. King, Clerk (expense of employes)	23.00	
Commonwealth Edison Company (lamp)	3.73	
A. Hannibal (repairs to chairs)	4.00	
Albert Hancock & Co. (carbon paper, etc.)	32.00	
Chicago Tribune (advertising tax levy)	43.00	
Hinckley & Schmitt Inc. (distilled water)	51.00	
		295.07
Real Estate Department.		
William A. Bond (service in appraisal of valuation)	$ 329.00	
Burr Vack Company (Bostton sharpener)	2.50	
		331.50
Police Department.		
L. F. King, Clerk (expenses of employes)	$ 40.00	
L. F. King, Clerk (expenses of employes)	33.06	
L. F. King, Clerk (realroad ticket)	11.88	
L. F. King, Clerk (realroad ticket)	11.88	
L. F. King, Clerk (realroad ticket)	11.88	
Kahlenberg Bros. Company (cylinder head gaskets, etc.)	11.35	
Chicago Telephone Company (telephone service)	4.40	
Geo. B. Carpenter & Co. (braided cord, etc.)	4.25	
		128.70
Amount carrier forward		$255,548.61

Amount brought forward		$255,548.61
General Account.		
United States Aduit Company (auditing books of General Department)	$ 2,545.50	
J. L. Jacobs Company (services and expenses in connection with investigation on the classification and standardization of position and employment, etc.)	1,386.89	
Great Lakes Dredge & Dock Company (explosives and service rendered)	38.75	
Chicago Telephone Company (telephone service)	6.15	
Chicago Telephone Company (telephone service)	4.30	
		$ 3,981.59
Electrical Department.		
L. F. King, Clerk (semi-monthly payroll)	$ 18,777.29	
L. F. King, Clerk (water taxes)	6.94	
The Wm. H. Reid Company (turbine oil)	162.90	
Commonwealth Edison Company (lamps, etc.)	153.42	
Commonwealth Edison Company (Mazda lamps)	61.94	
The Texas Company (oil)	63.50	
L. F. King, Clerk (expenses of employes)	1.30	
United States Audit Company (auditing books electrical department)	1,287.50	
Conroy Boiler & Tank Works (yard arm braces)	477.60	
Universal Cable Grip Company (rye grips)	136.40	
United Asbestos & Pkg. Company (hydraulic flax packing)	124.55	
Wilbur J. Connell (linseed oil)	118.83	
Garrett J. Cushing (personal injuries)	39.00	
Anton Asodowski (auto services for paymaster)	36.00	
S. Deschauer Company (braces)	35.28	
Standard Underground Cable Company (cable)	34.00	
Fischer & Hayes Rope & Steel Company (manila rope)	26.58	
Holman Soap Company (soap powder)	18.16	
Commonwealth Edison Company (Edison key sockets)	17.20	
Wilbur J. Connell (can covers)	13.14	
Dr. H W. Woodruff (professional services rendered)	3.00	
Henry Stuckart (nails)	1.50	
Inetrnational Harvester Company (crank dogs)	2.60	
Essenkay Products Co. (casing)	4.00	
Auto Radiator Mfg. Company (radiator repairs)	6.50	
J. P. Kearns & Co. (gunny bags)	7.98	
Old Glory Mfg. Company (flag)	8.75	
New York Belting & Packing Company (hose)	10.35	
A. C. Miller (gasoline)	12.65	
Barrett Hardware Company (flanges, etc.)	13.99	
The White Company (bushings, etc.)	15.14	
Conroy Boiler & Tank Works (repairing steel barrels)	20.00	
Wm. Sorgenfrei (rental)	20.00	
Central Electric Company (explosion whistles, etc.)	32.30	
General Electric Company (current transformers)	39.00	
The Kellogg Mackay Company (unions, couplings, etc.)	48.46	
Anderson Oil Company (auto oil)	63.84	
United States Aluminum Company (cable)	96.44	
Bentley-Murray & Company (printing contracts, etc.)	197.00	
Western Electric Company (watt meters)	212.25	
Ohio Brass Company (porcelain link strain ins.)	280.35	
Electric Service Supplies Company (insulators)	459.84	
Pittsburgh Transformer Company (transformers)	2,044.17	
L. F. King, Clerk (City water supply bill)	4.23	
L. F King, Clerk (railroad tickets)	30.88	
		$ 25,226.75
Amount carried forward		$284,756.95

Amount brought forward.....$284,756.95

Miscellaneous Accounts.

Chicago Telephone Company (telephone service)—			
Construction Account	$ 22.28		
Maintenance and Operation	32.37		
Police Department	.40		
		$	55.05
Chicago Telephone Company (telephone service)—			
Construction Account	$ 64.40		
Maintenance and Operation	20.83		
			85.23
Chicago Telephone Company (telephone service)—			
Construction Account	$ 84.46		
Maintenance and Operation	11.30		
			95.76
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 44.79		
Maintenance & Operation Account	217.24		
Real Estate Department	3.42		
Law Department	7.81		
			273.26
American Blue Print PaPer Company (blue prints)—			
Construction Account	$145.66		
Mainenance & Operation Account	12.47		
Law Department	3.18		
Real Estate Department	4.91		
General Account	1.20		
			167.42
Eugene Dietzgen Company (erasing fluid and scales)—			
Construction Account	$ .20		
Maintenance & Operation Account	5.00		
			5.20
L. F. King, Clerk (expenses of employes)—			
Maintenance & Operation Account	$ 12.75		
Clerical Department	5.26		
General Account	17.10		
Electrical Department	8.40		
			43.51
			725.43
Grand total			$285,482.38

Respectfully submitted,

JAS. H. LAWLEY,
MATT. A. MUELLER,
CHAS. H. SERGEL,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the accompanying vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel *(except as to voucher in favor of T. J. Forschner Contracting Co., for $46,783.07, on which Mr Sergel voted "nay")*, Carr, Clark, Healy, Lawley, Littler and Mueller—Seven

Nays—None *(except as above stated)*.

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, September 4, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the General Assembly of the State of Illinois, at its last session passed an Act, in force July 1, 1919, by the terms of which the Sanitary District was authorized to build and maintain highways along or near any of its channels on land owned by it and to repair and maintain the same whenever such highways so constructed or maintained are, in the discretion of the Board of Trustees necessary to make accessible and available for convenient use, dock property owned by the Sanitary District.

Your Committee further reports that it has received a report from the Chief Engineer relative to the right of way of the Sanitary District along its North Shore Channel with special reference to its availability for use as dock property which in general terms describes the location of said right of way, its width at various points, the channel built through the same and the accessibility of said right of way for dock purposes.

It appears that that part of said right of way extending from Lawrence avenue to a point where the same reaches the residential sections of the City of Evanston and Village of Wilmette is rapidly developing into business property and if a dock is constructed along its bank it can be devoted to that purpose, while that portion of said right of way located in the City of Evanston and the Village of Wilmette for a distance of about one and one half miles, if a dock is constructed along its bank can be devoted to other purposes. To render such docks accessible for all kinds of traffic it is necessary to construct a heavy traffic concrete highway along the bank of the North Shore Channel from Lawrence avenue to connect with Sheridan Road in the Village of Wilmette, consisting of a concrete highway 35 feet wide, 12 inches thick at the center and 8 inches thick at the sides with macadam shoulders 4 feet wide which will stand up under the heaviest traffic for many years.

The Chief Engineer recommends that a highway such as described be constructed upon the right of way of the North Shore Channel of the Sanitary District along the following route: beginning at Lawrence avenue and running near the east line of the right of way of said North Shore Channel to Lincoln avenue, thence across said channel and northerly near the west line of said right of way to Emerson street, thence back across said channel and running along near the east line of said right of way to Sheridan Road, Wilmette, the construction of said highway to include all necessary bridges, ditches culverts and a subway under the tracks and right of way of the Chicago & Northwestern Railroad Company (Mayfair Division) and all works incidental to a heavy traffic highway.

Your Committee having carefully considered the report of the Chief Engineer above referred to fully concurs in the same, and finds that in order to make the dock property of the Sanitary Dis-

trict, along its North Shore Channel, described in said report, accessible and available, it is necessary to construct upon said right of way such a heavy traffic highway following the route described by the Chief Engineer, and therefore recommends the passage of the following order:

Ordered, That the recommendation of the Chief Engineer to construct a heavy highway such as is described by him in said report, on the right of way of the North Shore Channel of the Sanitary District following the route therein specified be and the same is hereby approved.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
PATRICK J. CARR,
JAS. H. LAWLEY,
MATT A. MUELLER,
Committee on Engineering.

CHICAGO, September 2, 1919.

To the Honorable, the Chairman and Members of The Committee on Engineering.

GENTLEMEN—I have the following to report relative to the property of the Sanitary District along the North Shore Channel, with special reference to its availability for use as dock property.

At the present time both banks of the North Branch of the Chicago River are given over to industrial plants, using docks, as far north as Berteau avenue, which is three-fourths of a mile south of Lawrence avenue. Undoubtedly similar industries will, in the near future, push on upstream and the banks of the North Shore Channel will be in demand for dock purposes.

The right-of-way of the Sanitary District begins at Lawrence avenue and extends northerly for a distance of approximately eight miles to the shore of Lake Michigan in Wilmette. It comprises a strip of land approximately 660 feet wide, but it is as wide as 1100 feet in places. The North Shore Channel is about 80 feet wide at the water line and occupies generally the center of this 660 foot strip. There is, therefore, a strip of land about 290 feet wide on each side of the channel available for lease. At two places on the west side f the channel, the available property is wider. Between Ainslie and Argyle streets it is 400 feet wide and between Foster and Bryn Mawr avenues, for a distance of half a mile it has an average width of 640 feet. At one place, on the east side of the channel, between Touhy and Howard avenues, for a distance of half a mile, there is no property available for the reason that all the property, except the slope of the bank, is owned by the National Brick Company, which is using this slope for dockage. This company has constructed docks and slips and is making use of the North Shore Channel for navigation.

At the present time there is only one industrial lease from the Sanitary District along the North Shore Channel, namely, a parcel of land with dockage rights, just north of Lawrence avenue west of the channel. More of this property could be leased if a proper road were constructed making it accessible. There is no road paralled to and near the North Shore Channel and most of the roads crossing it are narrow, few of them paved, none constructed for heavy traffic, and generally they are one-half mile apart.

The Chicago and West Ridge Railroad runs parallel to the North Shore Channel, immediately east of the right-of-way of the Sanitary District from Lincoln avenue to Oakton avenue, a distance of two and one-half miles. This territory should develop rapidly into good dockage property. The next two and one-half miles of property along the Channel between Oakton avenue and West Railroad avenue, lies just west of the industrial section of Evanston, practically all of it within

one-half mile of the Chicago & Northwestern Railroad. This should also develop into good dockage property.

West of the North Shore Channel, practically all of the five mile stretch of territory from Bryn Mawr avenue to Emerson street is devoted to truck farming. The produce from this section could be transported to the South Water street district more cheaply by water than by the present methods. This would require the use of docks along the channel. One industrial plant, a gas plant, is now located on this side of the channel, at Oakton avenue.

The north end of the North Shore Channel passes through residence sections of Evanston and Wilmette, except the small section around Central street, Evanston, which is devoted to business. This one and one-half mile reach of the channel could be devoted to docks for pleasure craft.

It is obvious that practically all of the Sanitary District property along the North Shore Channel should develop into good dock property. A start has already been made by the lease at Lawrence avenue.

In order for this property to be developed so that it can be leased for dockage, and thus bring in revenue to the Sanitary District it is necessary that it be made easily accessible to all kinds of traffic. Accessibility can be obtained by the construction of a substantial road along the North Shore Channel from Lawrence avenue, Chicago, to Sheridan Road, Wilmette. A concrete raod, 36 feet wide, 12 inches thick at the center and 8 inches thick at the sides, with macadam shoulders four feet wide, should stand up under the heaviest traffic for the next decade, and longer if properly maintained. This will probably prove to be the cheapest form of road, as to first cost and maintenance.

I therefore recommend the construction of such a road along the North Shore Channel, beginning at Lawrence avenue, Chicago, and running near the east property line of the Sanitary District to Lincoln avenue; then across the channel and northerly near the west property line to Emerson street; then back across the channel and running along near the east right-of-way line to Sheridan Road, Wilmette; such construction to include all necessary drainage ditches, culverts, a subway under the Chicago & Northwestern Railroad (Mayfair Division), and all works incidental to a heavy traffic road.

Respectfully submitted,

G. M. Wisner,
Chief Engineer.

51st G. A. House Bill No. 260 in Senate, 1919.

Reported from House, May 23, 1919.

Read first time, ordered printed, and referred to Committee on Judiciary.

A Bill.

For an Act to amend an Act entitled, "An Act to create sanitary districts and to remove obstructions in the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, as amended, by adding thereto a section to be known as section 10a.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: An Act entitled, "An Act to create sanitary districts and to remove obstructions in the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, as amended, is amended by adding thereto a section to be known as section 10a, to read as follows:

Sec. 10a. Any district organized under this Act shall have power to build and miantain highways along or near any canal or channel built by the District upon land owned by said District, and to repair and maintain public highways near or along any such canal or channel, whenever such highways so constructed, or so repaired or maintained, are necessary, in the discretion of the Board of Trustees, to make accessible and avail-

able for convenient use dock property owned by the district.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Passed and not voting—Mr. Carr—One.

Mr. Clark presented the following report from the Committee on Engineering.

CHICAGO, September 4, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that on November 4, 1915 (page 1547 of the Proceedings) A. Guthrie & Co. Inc. entered into a contract with the Sanitary District for the excavation and collateral work on section 14 of the Calumet-Sag Channel, by the terms of which the mechanical and electrical equipment for the operation of and the sector gates themselves are to be tested in operation by said Contractor. He further states that the Sanitary District agreed to place transformers in the transformer house near said gates and to furnish electrical current thereto for the use of said Contractor in making said tests but in order to furnish said current, the Sanitary District will be obliged to install said transformers at once, and run three wires thereto from the nearest transmission lines of the Sanitary District which are on Ashland avenue.

He further states that said Company is now using electrical current furnished by the Public Service Company of Northern Illinois at a point between five and six hundred feet from said sector gates and that wires can be run and electric current furnished to make said tests at a cost of not to exceed $300.00 which is much cheaper than if such service is furnished by the Sanitary District, and he requests that he may be authorized to order A. Guthrie & Co. Inc. to perform the work above specified and obtain said electrical current, the same to be paid for under the extra work clause of its said contract.

Your Committee having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to order A. Guthrie & Co. Inc. to perform the work above specified and to obtain said electrical current the same to be paid for under the extra work clause of its said contract, provided the cost of the same shall not exceed the sum of $300.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT. A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Clark, Healy, Lawley, Littler and Mueller—Five.

Nays—None.

Passed and not voting—Messrs. Sergel and Nance—Two.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting held August 21, 1919 (page — of the Proceedings) bids for paving the Blue Island and Riverdale Road, having considered all proposals presented and the qualifications of each bidder together with the report submitted by the Chief Engineer finds that the lowest responsible bidder is the James A. Sackley Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for doing said work and having had the matter under consideration recommends the passage of the following order:

Ordered, That the contract for paving the Blue Island and Riverdale Road be and the same is hereby awarded to the James A. Sackley Company for the unit prices named in its bid aggregating the sum of $23,200.00, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute in duplicate the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by said James A. Sackley Company and a bond for the faithful performance of said contract has been approved by the Committe on Finance, and said Company has deposited with the Sanitary District Liberty Bonds, payable to bearer, of the face value of $12,000.00 as additional security for the faithful performance of said contract in accordance with the terms of an agreement executed by said Company and the Sanitary District, the form of which is to be approved by the Attorney; and it is further

Ordered, That the checks of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a final certificate from the Chief Engineer that the work covered by the contract of Byrne Brothers Dredging and Engineering Company, dated September 25, 1913 (page 1188 of the Proceedings) for the excavation and construction of contract section 9 of the Calumet-Sag Channel, has been completed in accordance with all the terms and conditions of the contract and to the satisfaction of the Chief Engineer and your Committee having read the final certificate of the Chief Engineer, hereto attached, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of

Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to pay to Byrne Brothers Dredging and Engineering Company, upon the voucher of the Chief Engineer the total sum of $1,000.00 found to be due under said contract, upon the execution by said Company of a receipt in full of all claims and demands arising out of or resulting from the performance of the work under said contract, and also upon the execution of an affidavit by an officer of said Company that all materialmen, mechanics and workmen employed by said Company have been paid in full; said payment, however, to be made subject to any unaccrued or unmatured obligations imposed by said contract.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
H. E. LITTLER,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

FINAL CERTIFICATE.

CHICAGO, August 19, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I transmit herewith final voucher amounting to $1,000.00 in favor of Byrne Bros. Dredging & Engineering Company, as per contract dated September 25, 1913 (page 1188 of Proceedings), for the excavation and construction of Contract Section 9 of the Calumet-Sag Channel.

The contract requires that all work be completed on or before November 1, 1917. The work was entirely completed on October 2, 1917, with the exception of about 100 square yards of rip-rap, which it was impossible for the contractor to place until he was ordered to discontinue pumping and to remove his pumps.

This pumping was ordered discontinued on October 21, 1917. The pumps were then removed and the rip-rap completed to the satisfaction of the Chief Engineer on November 3rd.

If this meets with your approval, I would recommend that the final voucher be paid.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

Mr. Clark presented the following report from the Committee on Engineering.

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on September 26, 1918 (page 1081 of the Proceedings) the Chief Engineer was authorized and directed to dismantle the sewage testing station at the Union Stock Yards, to salvage such material and apparatus from said plant as might be of value and erect an activated sludge testing station at the sewer outlet of one of the large tanneries situated on the North Branch of the Chicago River.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that it is advisable to install in two settling tanks now in said station certain mechanical devices manufactured solely by the Dorr Company known as a 20 foot and 12 foot Dorr thickener to be used for experimental purposes. He further states that the Dorr Company does not wish to sell said 20 foot thickener but has offered to rent the same to

the Sanitary District at the rate of $50.00 per month for the first six months and thereafter at the rate of $25.00 per month up to ten months total time, all rental paid to be credited on the purchase of other equipment from said Company. Also to rent to the Sanitary District a 12 foot thickener at a monthly rental of $120.00 per month or sell the same to the District for the sum of $1255.00 or a new thickener for the sum of $1288.00, and he requests authority to rent the two thickeners on the basis above mentioned and to make the best arrangements he can in applying any rental paid on the purchase price of similar thickeners.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized to arrange with the said Dorr Company for the rental of said thickeners on the basis hereinabove stated, and to make the best arrangements possible to have said Company accept on the purchase price of any apparatus hereafter purchased from said Company the amount paid to it by the Sanitary District as rental for the use of said thickeners.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

MATT A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering herewith submits a form of license agreement to be entered into between The Sanitary District of Chicago, and the Chicago and Western Indiana Railroad Company. The Belt Railway Company of Chicago, corporations, and the Director General of Railroads, operating the Chicago & Western Indiana Railroad and The Belt Railway of Chicago, whereby said companies grant permission to the Sanitary District to install and maintain a four duct underground conduit line across the right of way and under the tracks of said railroads, in the vicinity of 75th street, where the same intersects certain public highway known as Western avenue, in the City of Chicago, County of Cook and State of Illinois, the location of said conduit being indicated in red lines on the blue print attached to said agreement.

The agreement has been approved by the Attorney, and your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk be, and they are hereby authorized and directed to execute in triplicate said license agreement hereto attached.

Respectfully submitted,

WALLACE G. CLARK,
Chairman,

MATT A. MUELLER,
JAS. H. LAWLEY,
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Real Estate Development.

Mr. Clark presented the following report from the Committee on Real Estate Development:

CHICAGO, September 4, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Real Estate Development transmits herewith form of lease to be entered into between the Sanitary District and Vincent S. Buszwiewisz of lots 214, 217 and 218 in Sanitary District Trustees' Subdivision of the right of way from north and south center line of Section 30, township 39 North, Range 14 East of the 3rd Principal Meridian to the Will County line, containing 80.47 acres of land more or less, of which 40 acres are available for pasture from July 1, 1919 to June 30, 1922, at an annual rental of $80.00.

Your Committee reports that said lease is in the usual form, and provides that the Sanitary District may terminate the same by giving 90 days' notice in writing to said tenants of its intention so to do, in the event that it desires to use said land for any of its corporate purposes, other than for farming.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby, authorized and directed to execute in duplicate, the form of lease herewith submitted, the same having been executed by said lessee.

Respectfully submitted,

PATRICK J. CARR,
Chairman.
WALLACE G. CLARK,
WILLIAM J. HEALY,
MATT A. MUELLER,
Committee on Real Estate Development.

Mr. Clark moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

REFERRING BACK TO FINANCE.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, September 4, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the James A. Sackley Company, in the penal sum of $11,600.00, with Thomas J. Rigney and John B. Sackley as sureties thereon, for the faithful performance of its contract for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for paving Blue Island and Riverdale Road in the City of Chicago, County of Cook and State of Illinois, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the James A. Sackley Company in the penal sum of $11,600.00 above specified for faithful performance of its contract for paving Blue Island and Riverdale Road, be, and the same is hereby approved; and it is further

Ordered, That said contract and bond be printed in the Proceedings.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

The following is the contract of the Jas. B. Sackley Co. with the Sanitary District:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR PAVING THE BLUE ISLAND AND RIVERDALE ROAD IN THE CITY OF CHICAGO.

This Agreement, Made and entered into this..... day of..... A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated The Sanitary District, and the James A. Sackley Company, a corporation organized under the laws of the State of Illinois, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree, with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under the penalty expressed in the bond hereto attached, at his proper cost and expense to do all the work and furnish all materials, tools, labor and all appliances, and appurtenances, called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter specified, that are necessary for paving the Blue Island and Riverdale Road in the City of Chicago, County of Cook, State of Illinois.

The work done and materials furnished shall be strictly pursuant to and in conformity with the specifications and plans, which are signed, and made a part of this agreement. The said specifications and plans are intended to co-operate, and any work appearing upon the plans and not mentioned in the specifications, or mentioned in the specifications, and not appearing upon the plans, shall be executed according to the true intent and meaning of the said specifications and plans, the same as though the said work was contained and described in both.

It is further covenanted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of the Sanitary District of Chicago, and his properly authorized agents, by whose measurements and calculations the quantities and amounts (including extras) of the several kinds of work performed under this contract shall be determined and on whose inspection all work shall be accepted or condemned. The said Chief Engineer or other Engineer designated by the Chief Engineer of said Sanitary District, shall have full power to reject or condemn all materials furnished or work performed under this contract, which in his opinion do not conform to its spirit and to the terms and conditions herein expressed.

To prevent all disputes and litigation, it is further agreed by and between the said Sanitary District and said Contractor, that said Engineer shall determine all questions in relation to said work and the construction thereof, and he shall in all cases decide every question which may arise relative to the execution of the work under this contract on the part of the said Contractor, and his estimate and decision shall be final and conclusive; and such estimate and decision, in case any question shall arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this contract.

Wherever the words "Chief Engineer" or "Engineer" are used herein they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago, or other designated Engineer in charge of the work.

Wherever the words "the work" are used herein, they shall be interpreted

to mean the work including all material, labor, tools, and all appliances and appurtenances, necessary to perform and complete everything specified or implied on the plans or in this contract, in full compliance with all the terms and conditions hereof.

Wherever the word "section" is used herein it shall be understood to refer to the entire section of the specification following the number referred to in parenthesis.

The sections are numbered consecutively.

Wherever under the provisions hereof an order from the Engineer to the Contractor is required, such order shall be understood to mean a written order addressed to the Contractor and signed by the Chief Engineer of The Sanitary District of Chicago.

PAVING THE BLUE ISLAND AND RIVERDALE ROAD IN THE CITY OF CHICAGO.

Specifications Location.

1. The improvement covered by these specifications is to be constructed on the public highway known as the Blue Island and Riverdale Road and the streets intersecting the same between Halsted street and Wentworth avenue located in the City of Chicago, County of Cook, State of Illinois.

Description.

2. The work covered by these specifications consists of preparing the sub-grade, paying with macadam, constructing road ditches and otherwise improving the Blue Island and Riverdale Road within the limits and in the manner shown on the accompanying plans and as herein specified and as directed by the Engineer.

The work under this contract includes all the work embraced by these specifications and accompanying plans, all of which are made a part hereof. In the event of any discrepancy between the plans and specifications, the decision of the Engineer shall be decisive thereon. The figured dimensions on the plans are to be taken as correct, but the contractor is required to carefully check all dimensions of structures before beginning work thereon. Should any errors be discovered, the Engineer's attention shall be called to same, and proper corrections made. All notes on the plans shall be carefully observed by the Contractor, and are made a part of this contract. All elevations shown on plans herein specified are referred to Chicago City Datum (C. C. D.)

The Sanitary District will require that the work be prosecuted with all speed, and with the least inconvenience to the public and abuttors.

Character of Material.

3. A profile of the ground and cross sections of the roadway as shown on the accompanying plans are believed to be reasonably correct, but do not purport to be absolutely so, and together with any schedules of quantities are presented as only an approximation. It is not expected that rock will be found. The Contractor must satisfy himself regarding the character or amount of peat, clay, sand, quick sand, gravel, glacial drift, rock and all other material to be encountered and work to be performed.

ITEM 1—MACADAM PAVEMENT.

Description.

4. Item 1 comprises the clearing of the area to be paved, the preparation of the sub-grade, the construction of the macadam pavement, the maintenance of the work and all other items incidental thereto.

The price specified to be paid per square yard of finished macadam pavement shall include the furnishing of all labor, tools, material and appurtenances necessary to carry out the work as shown on the plans and as herein specified and to fully complete the pavement ready for use and traffic; and shall also include the providing of watchmen, signs, fences, red lights, and all other precautionary measures necessary for the protection of persons, and property, the clearing of the ground, the excavation and filling required to prepare the areas to be paved, and all other work herein specified to be performed under Item 1.

The Contractor shall make all adjustments necessary to bring the existing manholes to the grade of the finished roadway as established by the Engineer, including the furnishing and placing of brick masonry or the cutting and removing of concrete and resetting the cast iron frames and covers, all cost of said work being included in the unit price herein specified under Item 1.

Sub-Grade.

5. The Contractor shall clear the areas to be paved of all roots, trees, timbers, fences, pipes, debris or other ob-

stacles and shall remove such materials from the site of the work. He shall perform all excavations and all filling necessary to bring the sub-grade to the required elevations. All excavated materials if suitable for the purpose may be placed elsewhere in the roadway embankment or shall be removed from the site of the work. Where filling is required the contractor may place in the embankment suitable materials which have been excavated in constructing the road ditches as specified under Item 2. If no suitable excavated materials are available, the contractor shall furnish at his own expense all filling materials required to construct the specified sub-grade.

All soft, spongy and yielding spots, and all vegetable or perishable material shall be entirely removed from the sub-grade and the space refilled with gravel, broken stone or other suitable material.

The sub-grade shall be brought to a firm, unyielding surface by thoroughly rolling with a self-propelled roller weighing not less than ten (10) tons and all portions of the surface of the sub-grade that are inaccessible to the roller shall be thoroughly tamped with a hand tamper about ten (10) inches in diameter, and weighing not less than fifty (50) pounds.

The shoulders along both sides of the macadam roadway constructed hereunder shall be rolled and compacted when the finished roadway surface is being rolled.

After the sub-grade is prepared the surface elevations of the same shall be determined and if correct accepted by the Engineer before any stone is deposited on it. If not correct, such alterations shall be made as are ordered to attain the desired grade.

Macadam.

6. Upon the sub-grade, prepared as herein specified, shall be spread a sufficient quantity of first-class limestone macadam of uniform size, to make a layer, when thoroughly rolled, seven (7) inches thick. The broken stone shall have its diametrical axes as near as possible the same length, of a size to pass through a ring seven (7) inches in diameter, and be retained on a ring two (2) inches in diameter. The crushed stone shall be clean, hard, durable, particles of stone free from loam, clay or organic matter, soft or micaceous pebbles or other impurities. Upon this layer of broken stone shall be spread a sufficient quantity of sand or limestone screenings to just fill all interstices and thoroughly bond the stone. The entire surface shall be thoroughly flooded with water and rolled with a ten (10) ton roller until the material is solidly compacted to a true even surface.

Medium.

7. Upon the macadam above specified shall be spread a layer of medium crushed limestone of the quality specified in Section 6, crushed to a size to pass through two (2) inch ring, but be retained on a one (1) inch ring. A sufficient quantity shall be placed to produce, when thoroughly rolled, a layer five (5) inches thick. Upon this shall be spread a sufficient quantity of limestone screenings to entirely fill all interstices and completely bond the medium crushed stone. The surface of the roadway shall then be kept well sprinkled and rolled with a ten (10) ton roller until the road is thoroughly puddled and solidly compacted, and no further settlement takes place. All surplus mud or gravel, or surplus crushed stone, screenings or other debris shall be cleaned from the surface as ordered by the Engineer.

All materials used in the macadam pavement and the method of placing same shall be subject to the approval of the Engineer.

Maintenance.

(8) The Contractor shall maintain the macadam pavement during the period of this contract, shall repair the roadway embankments and pavements whenever depressions or other defects appear in same by placing and compacting additional filling material and paving material, and by performing other work thereon as the Engineer may direct, and shall leave the pavement in good condition and true to grade upon completion of all work hereunder.

Measurements.

(9) No extra or customary measurements of any kind will be allowed in measuring the work under these specifications. The actual number of square yards of surface of macadam pavement placed will be measured by the Engineer and used in computing the square yards of macadam pavement to be paid for.

Payment.

(10) The unit price specified to be paid per square yard for macadam

pavement, under Item 1 shall include the excavation, filling and preparation of the sub-grade, furnishing and placing of material, the rolling and compacting, disposal of all surplus excavation, cleaning up of ground, care of existing structures, maintenance, etc., as specified, and furnishing of all labor, material, appurtenances, etc., necessary to complete the work as specified.

ITEM 2—EXCAVATION.

Description.

(11) Item 2 comprises the excavation of drainage ditches along both sides of the roadway constructed hereunder and any excavations ordered to be performed by the Engineer other than that necessary to prepare the sub-grade for macadam pavement.

The price specified to be paid per cubic yard of excavation shall include all clearing and grubbing, disposal of excavated materials, all pumping, and drainage of the site, maintenance of the work and the furnishing of all labor, tools, materials and appurtenances necessary to carry out the work as shown on the plans, and as herein specified and to fully complete the ditches in serviceable condition throughout their entire length.

All work of cleaning out existing drainage pipes, culverts and catch basins and connecting same to the ditches constructed hereunder shall be performed by the Contractor without extra charge therefor.

Excavation.

(12) The Contractor shall excavate the specified drainage ditches along both sides of the roadway constructed hereunder to the lines and grades shown on the plans and established in the field by the Engineer. The side slopes of said ditches shall be true to line, smooth and uniform throughout.

Disposal.

(13) All materials excavated in constructing ditches and elsewhere under this contract if suitable for the purpose may be deposited in the roadway embankments as herein specified under Item 1. All excavated material which in the opinion of the Engineer is not suitable for the roadway embankment, and all excess material not needed therefor shall be removed from the site of this work by the Contractor.

Maintenance.

(14) The Contractor shall maintain the ditches during the period of this contract, shall perform all cleaning necessary and shall leave the specified ditches true to line, grades and dimensions, and in serviceable condition throughout their entire length upon completion of all work hereunder.

Measurement.

(15) The amount of excavation for which payment will be made under Item 2 of this contract will be determined from the cross section notes and estimates of the Engineer. Payment will be made for the actual yardage removed from within the theoretical prism of the ditch. No payment will be made for any excavation outside or in excess of the theoretical cross sections of the ditch as shown on the plans and as staked out in the field by the Engineer, and no payment will be made for excavation of any additional material required for filling or grading the roadway embankment.

Payment.

(16) The unit price specified per cubic yard for excavation under Item 2 shall include clearing and grubbing, excavating of materials, disposal of excavated materials, pumping and draining the site, maintenance of the work and furnishing all labor, materials, appurtenances, etc., necessary to complete the work as specified.

ITEM 3—12 INCH PIPE.

Description.

(17) Under Item 3 the Contractor shall furnish and lay new vitrified tile pipe for the culverts at street intersections and elsewhere, as shown on the plans or ordered by the Engineer, to the lines and grades given by the Engineer.

The price specified to be paid per lineal foot of 12 inch vitrified tile pipe, shall include the furnishing of all labor, tools, materials and appurtenances necessary for constructing the culverts and for backfilling, and restoring the roadways across the trench, all as shown on the plans, or as ordered by the Engineer. Excavation necessary for placing the pipe will be paid for under the unit price for excavation specified under Item 2.

Vitrified Tile Pipe.

(18) All vitrified tile pipe shall be of standard quality made of the best material, thoroughly and perfectly

burned, of homogenous texture without cracks or imperfections, well glazed, so that their inner and outer surfaces shall be smooth, hard and even.

The pipe shall be at least two (2) feet in length, and shall be straight, true to form, of full diameter throughout, and shall have deep and wide socket joints. The thickness of the pipe and the dimensions of the deep and wide socket shall be at least equal to those of single strength standard sewer pipe.

Laying Pipe.

(19) All pipes shall be laid true to the lines and grades given by the Engineer. The ends or shoulders of each pipe shall abut against the next adjacent pipes in such a manner that there will be no unevenness of any kind along the bottom half of the pipes. The bed shall be even and firm. Bell holes shall be cut, and particular care shall be taken to prevent the pipe bearing on the socket.

Joints.

(20) Jute gaskets saturated with neat Portland Cement shall be placed in the bell of each pipe, and the joints thoroughly filled and rammed with Portland Cement mortar made of equal volumes of cement and clear, sharp screened torpedo sand.

Interior of Pipe.

(21) The interior of the pipe shall be thoroughly cleaned and all dirt, cement or superfluous materials of every description removed therefrom as the work proceeds, for which purpose a disc mold or swab, filling the entire bore of the pipe, and attached to a rod sufficiently long to pass two (2) joints from the ends of the pipe last laid shall be continuously worked through as the laying of the pipe proceeds.

Measurment.

(2) No extra or customary measurements of any kind will be allowed in measuring the work under these specifications. The actual length measured on the center line of the work shall be used in computing the lineal feet of pipe to be paid for.

Payment.

(23) The price specified to be paid per lineal foot of pipe under Item 3 shall include the furnishing and placing of all materials, and backfilling and restoration of the roadways across the trench, and the furnishing of all labor, tools, materials and appurtenances necessary to complete the culverts, and all work incidental thereto as specified.

GENERAL CONDITIONS

Sanitary District Law.

Article 1. The said Contractor hereby agrees to carry on all the work provided for in this contract in strict conformity with the requirements of the law under which The Sanitary District of Chicago is organized, entitled, "An Act to Create Sanitary Districts and to Remove Obstructions from the Des Plaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889, and all acts amendatory thereof and supplementary thereto.

City Ordinances.

Art. 2. The said Contractor also agrees to carry on all work provided for in this contract in strict conformity with all ordinances of the City of Chicago and all Acts of Congress which in any way affect the performance of the work hereunder.

Omissions on Contract Drawings.

Art. 3. The Contract Drawings furnished, form a part of these specifications, and any work shown thereon shall be executed the same as if mentioned herein. The work is to be made complete, and to the satisfaction of the Engineer, notwithstanding any minor omissions in the specifications or contract drawings.

Examination of Site.

Art. 4. All bidders for work under this contract are required, before submitting proposals to examine the sites of the work and adjacent premises, the various means of approach to the sites and the plans hereinbefore mentioned as being on file in the office of the Chief Engineer, and to make all necessary investigations in order to inform themselves thoroughly as to the character and magnitude of all work involved in the complete execution of this contract also as to the facilities for delivering and for handling material and plant at the site, and for disposing of material to be removed from the site, and the conditions and difficulties that will be encountered in the performance of the work specified herein. No pleas of ignorance of conditions that exist, or that may hereafter exist, or of difficulties that will be encountered in the execu-

tion of the work hereunder, as a result of failure to make the necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time for the performance of the work

Approximate Quantities.

Art. 5. It is expressly understood and agreed by the parties hereto that the quantities of the various classes work to be done and materials to be furnished under this contract, which have been estimated as stated in the advertisement and in the "Requirements for Bidding and Instructions to Bidders," attached hereto, are only approximate and are to be used solely for the purpose of comparing on a uniform basis, the proposals offered for the work under this contract; and the Contractor further agrees that the Sanitary District will not be held responsible if any of said quantities shall be found incorrect; and said Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done or for an extension of time for the performance of the work. If any error, omission, or misstatement shall be discovered in the said estimated quantities, the same shall not invalidate this contract or release the Contractor from the execution and completion of the whole or any part of the work herein specified, to the satisfaction of the Engineer and in accordance with the specifications and the contract drawings, herein mentioned, and for the prices herein agreed upon and fixed therefor, or excuse him from any of the obligations or liabilities hereunder or entitle him to any damages or compensation otherwise than may be provided for in this contract, except for such extra work as may be required, for the performance of which written orders must be given and received as herein specified.

Changes in Contract Drawings.

Art. 6. The Sanitary District reserves the right to make any changes in the specifications and Contract Drawings which may be deemed necessary either before or after beginning any work under this contract, without invalidating this contract; provided, that if alterations are made, the general character of the work as a whole is not changed thereby. If such alterations increase the quantity of the work to be done, such increase shall be paid for according to the quantity of work actually done at the unit prices specified under this contract for each class of work performed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages or for loss of profits on the work that may be dispensed with, and the said Sanitary District shall not be required to pay for work or material omitted.

Extra Work.

Art. 7. The Contractor shall perform only such extra work as the Engineer may order in writing, provided however, that no extra work, the total price or cost of which is in excess of $500.00, shall be performed by the Contractor until the Engineer is authorized to issue a written order therefor by the Board of Trustees of said Sanitary District.

Whenever work is required to be done which is not now contemplated or covered by the prices herein specified, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the Contractor shall abide by such prices, provided, he enters upon such work with a full knowledge of the prices so fixed by the Engineer, but if the Contractor declines to perform said work at the prices fixed by said Engineer, then the Sanitary District may contract with any person or persons for its performance the same as if this contract had never existed; and if extra work, or work not provided for in this contract is ordered performed by the Engineer and is so performed by the Contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall consider just and reasonable and his decision shall be final and binding upon both parties to this contract and the said Contractor shall accept such prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if extra work done under this contract is of such a nature being distinct from other work being done by the said Contractor, that in the opinion of the Engineer the actual cost of the same can be determined, then the

said Contractor shall receive and the Sanitary District shall pay in full satisfaction for the same, the actual cost of the work as determined by the Engineer with fifteen (15) per cent added for superintendence, use of tools and profit, provided that said fifteen (15) per cent shall not be added to any unit or lump sum price fixed by the Engineer for extra work performed by the Contractor.

A statement of all claims for extra labor or material furnished by the Contractor or for damages from any cause whatsoever, must be reported to the Engineer in writing at the time such labor or material is furnished or such damages occur and they must also be presented to the Engineer and the Committee on Engineering of the Board of Trustees of said Sanitary District in writing within ten days after the end of the month. Whenever so required, the Contractor shall deliver to the Engineer each day a signed statement of the extra labor and material furnished during that day. The written orders of the Engineer to the Contractor to perform any extra work therein mentioned and the written notices and statements of the work performed hereinbefore and hereinafter required from said Contractor are conditions precedent to any recovery on the part of said Contractor for any extra work performed.

Estimating Extra Work.

Art. 8. In estimating the cost of extra work, the cost of material shall be the actual price paid for same delivered at the site of the work. The cost of labor shall be taken as the amounts paid for same as shown by the payrolls of the Contractor, with cost of indemnity insurance added, when such can be shown to have been paid. No charge for cost of administration will be allowed except as covered by said allowance of fifteen (15) per cent for superintendence, use of tools and profit. The Contractor shall, if requested by the Chief Engineer, verify by his affidavit the correctness of the amounts paid for materials and labor. It is further agreed that in all cases of question or dispute arising or growing out of this contract in anyway regarding the cost or value of extras, variations, allowances, deductions or the amount of damages in any manner growing out of delay or of the violation of any of the provisions of this contract, the decision of the Engineer shall be final and binding on both parties hereto.

Supervision.

Art. 9. All work provided for under this contract shall be done under the direction and supervision of the Engineer and his properly authorized agents. The Contractor shall be guided by the lines, stakes, marks and grades given by them, and shall carefully preserve the same as far as possible during the progress of the work, and shall furnish all needed facilities, without extra charge therefor, to enable the Engineer to properly give lines and grades and measure the work from time to time.

Materials, Workmanship and Inspection.

Art. 10. All materials of whatsoever kind to be used in the work shall be subject to the inspection and approval of the Engineer, and shall be subject to constant inspection before acceptance. Any imperfect work that may be discovered before its final acceptance shall be corrected immediately and any unsatisfactory materials used in the work or delivered at the site shall be rejected and removed on the requirement of the Engineer. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work, as herein specified, and all work which, during the progress and before its final acceptance may become damaged from any cause, shall be removed and replaced by good and satisfactory work, without extra charge therefor. The Engineer and his assistants shall have at all times free access to every part of the work and to all points where material to be used in the work is manufactured, procured, stored or dumped and shall be allowed to examine any material furnished for use in the work under this contract.

All inspection of any and all material furnished for use in the work to be performed under this contract shall be made at the site of the work after the delivery of the material; provided, that, if requested by the Contractor, the Engineer may at his option perform, or have performed, inspection of material at points other than at the site of the work. In any such case the Contractor shall pay the Sanitary District the extra cost of such inspection, including the necessary expenses of the inspector and the salary of the inspector for the

extra time expended in performing any such inspection at said other points.

Progress Certificates.

Art. 11. It is further expressly agreed that the granting of any progress certificates, or the payment of any moneys hereunder, shall in no way lessen the liability of the Contractor to replace defective material and work, though the same may not have been detected at the time such certificate was given or acted upon. All progress certificates, being made merely upon approximate estimates shall be subject to the correction of the final certificate.

Cost of Work.

Art. 12. All books and accounts kept by the Contractor in connection with this contract shall be open to the inspection of the Chief Engineer of the Sanitary District, or his properly accredited representative.

The Contractor shall furnish the Engineer reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the work and the character of the materials, including all information necessary to determine the cost of the work, such as the number of men employed, their pay, the time during which they have worked on the various classes of construction, the cost of repairs to machinery, and other information required by the Engineer. The Contractor shall, on request, furnish the Engineer with copies of expense bills for transportation charges on all machinery, material and supplies shipped to or from the work under this contract.

Plant.

Art. 13. The Contractor shall furnish all material and supplies, plant, tools and implements, in fact, all material and appliances of every sort or kind that may be necessary for the full and complete carrying out of this contract, and shall furnish and maintain, subject to the approval of the Engineer all barricades and other protections, lights and signs, necessary for the proper protection of the public. He shall also furnish a watchman. The cost of all the above shall be covered by the amounts paid at the rates and prices herein specified, and no extra charge shall be made therefor.

Night, Sunday or Holiday Work.

Art. 14. Whenever the Contractor shall be permitted or directed to perform work at night or on Sundays or holidays, or to vary the period of hours during which work is carried on each day, he shall give written notice to the Engineer, so that proper inspection may be provided. Such work shall be done under the regulations to be furnished in writing by the Engineer and no extra compensation shall be allowed therefor.

Clearing Site.

Art. 15. The Contractor further agrees to remove all materials, implements, barricades, falsework, debris and rubbish connected with or caused by said work immediately upon completion of the same and to leave the site of the work in perfect condition insofar as affected by the work under this contract.

Precautions.

Art. 16. The Contractor shall take whatever precaution may be necessary to render any portion of the work secure in every respect, or to decrease the liability of accident, from any cause, or to avoid contingencies which are liable to delay the completion of the work.

Workmen.

Art. 17. The Contractor shall employ competent foremen and laborers, and shall discharge at the request of the Engineer any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

Sanitation.

Art. 18. In accordance with the Rules and Regulations for the Guidance of Sanitary Inspector, etc., adopted by the Board of Trustees on July 31, 1913, page 997 of the Proceedings for 1913, the Contractor shall introduce and enforce among his employes such regulations in regard to cleanliness, and the disposal of garbage and wastes, as shall conduce to their health and tend to prevent the inception and spread of contagious and infectious diseases among them, and shall make provision for an ample supply of suitable drinking water, and shall take such means as the Engineer may direct to effectually prevent the creation of a nuisance on any part of the right of way or property or said Sanitary District, easement, streets or adjacent property. Necessary sanitary conveniences for the use of the labor-

ers on the work, properly secluded from public observation shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced.

Patents.

Art. 19. It is further agreed that the Contractor shall indemnify, keep and save harmless said Sanitary District from all liabilities, judgments, costs, damages and expenses which may in anywise come against said Sanitary District, or which may be the result of an infringement of any patent by reason of the use of any material, machinery, devices, equipment or processes furnished or used in the performance of this contract, or by reason of the use of designs, furnished by the Contractor and accepted by the Sanitary District, and in the event of any claim or suit or action at law or in equity of any kind whatsoever being made or brought against said Sanitary District, then the Sanitary District shall have the right to retain a sufficient amount of money in the same manner and upon the same conditions as hereinafter specified in the next following clause of this contract.

Damages.

Art. 20. If any damage shall be done by the Contractor or by any person or persons in his employ to the owner or occupants of any land or to any real or personal property adjoining or to the property of a neighboring contractor, the Engineer shall have the right to estimate the amount of said damage, and cause the Sanitary District to pay the same to the said owner, occupant or contractor, and the amount so paid for said damages shall be deducted from the money due said Contractor under this contract. Said Contractor covenants and agrees to pay all damages for any personal injury sustained by any person growing out of any act or doing of himself, or of his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and save the Sanitary District harmless against all suits or actions of every name and description brought against said Sanitary District for, or on account of any such injuries or such damages received or sustained by any person or persons, from said Contractor, or his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same or by or on account of any omission or act of said Contractor, his agents or employes; and the said Contractor further agrees that so much of the money due him under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of said Sanitary District, may be retained by the Sanitary District until such suit or claim for damages shall have been settled, and evidence to that effect shall have been furnished to the satisfaction of the said Board of Trustees.

Employers' Liability Act.

Art. 21. The Contractor further agrees to insure to his employes or their beneficiaries the necessary first aid, medical, surgical and hospital services, and the compensation provided for in Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State;" providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment, approved June 10, 1911, in force May 1, 1912, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or deaths suffered by any of his employes in and about the performance of this contract.

Responsibility of Contractor.

Art. 22. The Contractor shall be responsible for the entire work until completed and accepted by the Sanitary District. The Contractor will be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He shall keep the same under his control, and shall not sublet any part of it. The Sanitary District will not recognize any parties engaged on the work embraced by this contract other than the Contractor and his employes.

The Contractor shall not assign, by power of attorney or otherwise, any portion of the moneys that may become due through the performance of this contract.

Liens.

Art. 23. If at any time during the progress of said work, the said Contractor shall fail or neglect to pay for any labor performed, material furnished, or tools, machinery, appliances, fuel, provisions or supplies of any sort or kind used or consumed in, upon or on account of said work for ten (10) days after payment for same shall have become due, then the said Sanitary District shall have the power to pay for such labor or for materials, tools, machinery, appliances, fuel, provisions or supplies, and the amount so paid shall be retained out of the money due or to become due to said Contractor. The said Sanitary District may refuse to make the payments hereinafter mentioned to the extent of such indebtedness until satisfactory evidence in writing has been furnished that said indebtedness has been discharged. In any such case, said Sanitary District is hereby authorized and empowered by said Contractor to ascertain by the Engineer the amount due or owing from said Contractor to any laborer or laborers, or to any person or persons, or corporation, for labor, equipment, materials, tools, machinery, appliances, fuel, provisions or supplies of any sort or kind consumed upon, in or on account of the work covered by this contract in such manner and upon such proofs as the said Engineer may deem sufficient.

Time.

Art. 25. The Contractor agrees to begin the work covered by this contract within thirty (30) days from the date of the approval by the Board of Trustees of said Sanitary District of the bond of said Contractor, and to prosecute the same with all due diligence and to entirely complete the work on or before December 1, 1919.

It is understood and agreed that Time is the essence of this contract, and that a failure on the part of said Contractor to complete the work herein specified within the time specified will result in great loss and damage to said Sanitary District, and that on account of the peculiar nature of such loss or damage it is difficult, if not impossible, to accurately ascertain and definitely determine the amount thereof.

Liquidated Damages.

Art. 26. It is therefore covenanted and agreed that in case the said Contractor shall fail or neglect to complete the work herein specified on or before the date hereinbefore fixed for completion, the said Contractor shall and will pay the said Sanitary District the sum of Ten Dollars ($10.00) for each and every day the Contractor shall be in default in the time of completion of this contract.

Said sum of Ten Dollars ($10.00) per day is hereby agreed upon, fixed and determined by the parties hereto, as the liquidated damages which said Sanitary District will suffer by reason of such defaults, and not by way of a penalty. In case the said Contractor does not complete the work covered by this contract on or before the time specified herein for the completion of the said work, the Engineer shall decide the number of days the said Contractor is in default, and the decision of said Engineer shall be final and binding upon both parties hereto. It is further agreed that if said Sanitary District shall accept any work or make any payments under this contract after any such default, such acceptance, payment or payments, shall not in any respects constitute a waiver or modification of any of the provisions hereof, and particularly the provisions in regard to Time and Liquidated Damages for Delays.

Extensions or Additions.

Art. 27. In the event that any material alterations or additions are made as herein specified, which in the opinion of the Engineer will require additional time for the execution of any work under this contract, then in that case the time of the completion of the work shall be extended by such a period or periods of time as may be fixed by said Engineer, and his decision shall be final and binding upon both parties hereto, provided that in such case the Contractor, within four (4) days after being notified in writing of such alterations or additions, shall request in writing an extension of time, but no extension of time shall be given for any minor alterations or additions, and the provisions of this paragraph shall not otherwise alter, change or invalidate the provisions of this contract, with reference

to "Liquidated Damages" and the said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of such additional time required for the execution of the work.

Notice to Suspend Work.

Art. 27. The Contractor shall delay or suspend the progress of the work or any part thereof, whenever he shall be so required by written order of the Engineer, and for such periods of time as the Engineer may order, provided, that in event of such delay or delays or of such suspension or suspensions of the progress of the work, or any part thereof, the time for the completion of the work so suspended or of work delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, but such order of the Engineer shall not otherwise modify or invalidate in any way any of the provisions of this contract, and said Contractor shall not be entitled to any damages or compensation from the Sanitary District on account of such delay, or delays, suspension or suspensions.

Unavoidable Delay.

Art. 28. Should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by necessary or unavoidable act or delay of the Sanitary District or by riot, insurrection, war, pestilence, strikes, acts of public authorities, fire, lightning, earthquake, cyclone or through any default of other parties under contract with said Sanitary District, then the time herein fixed for the completion of such part of said work, so delayed, shall be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowances shall be made unless a claim therefor in writing is presented to the Engineer within four (4) days after the commencement of such delay. And it is further expressly agreed that said Contractor shall not be entitled to any damages or compensation from the said Sanitary District on account of any delays resulting from any of the causes above specified, except compensation for wages for extra time for any necessary watchmen and for extra premiums on his bond actually paid by said Contractor on account of said additional time so required to complete all work hereunder, due only to delays caused by the Sanitary District or by other parties under contract with said Sanitary District. Said Engineer shall decide the number of days that said Contractor has been so delayed, and his decision shall be final and binding upon both parties hereto.

Forfeiture of Contract.

Art. 29. It is further agreed by said Contractor that if the work to be done under this contract shall be abandoned by the Contractor, or if there shall be a failure by said Contractor to perform the work of the character, and in the time herein specified; or if said Contractor shall fail financially or from any other cause whatsoever be unable to carry out said contract and complete the said work; or if the contract shall be assigned by the said Contractor; or if the Contractor shall lose control of said work for any cause whatsoever, except by act of God or the public enemy; or if the Contractor shall refuse to or neglect to follow the instructions of the Engineer; or if in the opinion of the Engineer the Contractor refuses or neglects to use measures to protect the said materials, work and adjacent structures from damage; or if in the opinion of the Engineer the Contractor is guilty of carelessness or incompetency in the execution of said work; or in the opinion of the Engineer the said work has been or is being delayed by the Contractor; or if in the opinion of the Engineer the rate of progress is not such as to insure the completion of the work within the time specified or if at any time the Engineer shall be of the opinion and so shall certify in writing to said Sanitary District that said work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor is willfully or persistently violating any of the conditions or covenants of this contract, or is not fulfilling said contract in good faith, said Sanitary District shall have the power and authority, and may then immediately notify said Contractor to discontinue all work or any part thereof, that may be designated by the Engineer of said Sanitary District.

Upon notice being given as aforesaid, by the said Sanitary District to the said Contractor, or upon the happening of any of the conditions hereinbefore in

this section specified, the said Sanitary District shall have a lien upon all the materials, supplies, machinery, implements and tools of the Contractor for the purpose hereinafter specified, and the said Sanitary District may thereupon immediately take possession of all said materials, supplies, machinery, implements and tools, for the uses and purposes hereinafter set forth; thereupon the said Sanitary District shall have the power to, and may at the cost of said Contractor, complete the said work by letting a new contract, and in completing the said work by contract, said Sanitary District may use such materials, supplies, machinery, implements, tools and plant as may be the property of said Contractor, and may make the necessary repairs and replacements thereto.

The cost of fully completing all the work provided for under this contract shall include the sum or sums of money paid by the Sanitary District to other contractors if all or any part of said work is completed by contract, and any sum or sums of money paid by the Sanitary District for the cost of repairs and replacements upon machinery, implements, tools and plant of the Contractor hereunder, used in the completion of said work, and also all sums of money paid for first aid, medical, surgical and hospital attendance and as compensation for accidental injuries or death suffered by employes in the course of their employment in the performance of said work under the employers' liability act of the State of Illinois in force July 1, 1913, and all acts amendatory thereof and supplementary thereto.

The cost of fully completing all the work under this contract as aforesaid shall be charged to the said Contractor, and the amount of said cost or expense so charged shall be deducted from and paid by the Sanitary District out of any moneys that may be due, or may at any time thereafter become due to said Contractor under and by virtue of this contract, so far as the same shall suffice therefor.

Should the amount remaining unpaid of the contract price be insufficient to reimburse the Sanitary District for the cost of fully completing all work as foresaid then the Sanitary District may sell all materials, supplies, machinery, implements, tools and plant then on hand, obtained from said Contractor, at public sale on giving said Contractor twenty (20) days' notice of the time and place of such sale, and the net proceeds derived from the sale of the said property at such sale shall be credited to the Contractor, and should the amount received from said sale be then insufficient to pay such deficiency, the Contractor and his bondsmen shall be liable to pay the amount of said deficiency; and at any such sale of said property as provided hereunder, the Sanitary District may bid and become a purchaser of said property.

Contractor's Bond.

Art. 31. The Contractor shall furnish a bond in the sum of fifty (50) per cent of the amount of this contract for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the Sanitary District, conditioned upon the faithful performance of all the terms and conditions of this contract; and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then in that case the said Board of Trustees may, on giving ten (10) days' notice thereof in writing, require said Contractor to furnish a new and additional bond in place of the bond so having become insufficient, with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

Prices.

Art. 32. And the said Contractor further agrees to accept the following prices as full compensation for furnishing all the labor, tools, materials and appurtenances necessary to complete the work specified, and for doing all the work contemplated and specined in this contract, also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the work; and for well and faithfully completing the work, and the whole thereof, in full compliance with the plans and specifications, and the requirements of the Engineer under them, to-wit:

1. For Macadam Pavement, complete, in place, as specified, the sum of

One Dollar and Sixty-five Cents ($1.65) per square yard.

2. For Excavation, including disposal of material, as specified, the sum of One Dollar and Ten Cents ($1.10) per cubic yard.

3. For 12-inch Tile Pipe, complete, in place, as specified, the sum of Two Dollars and No Cents ($2.00) per lineal foot.

The foregoing prices shall cover the cost of all plant and tools and of all work and materials of whatsoever kind that shall be furnished or needed to complete the entire work in all details ready for the purpose for which it is intended. Said prices shall also cover all royalties for patents, and patented material, appliances and processes used in the work described in the specifications and agreements. Before final payment is made, the Contractor shall furnish a satisfactory guarantee against all claims on account of work performed, tools and plant employed, and material and labor furnished hereunder, and against all claims for patents, patented materials, appliances and processes used in or on account of the work under this contract.

Progress Estimates.

Art. 33. The said Sanitary District agrees to pay said Contractor the sums herein specified in monthly installments as the work progresses upon certificates signed by said Engineer, but said certificates, however, shall in no way lessen the total and final responsibility of the Contractor. It is agreed that the amounts to be paid from time to time shall in no case exceed Eighty-seven and One-half (87½) per cent of the value of the work properly performed under this contract, and that the remaining Twelve and One-half (12½) per cent shall be reserved by the said Sanitary District as part security for the faithful performance hereof and shall not become due said Contractor until the expiration of thirty (30) days after the completion of said work and delivery of the final certificate of said Engineer, and after payment by said Contractor of all claims for labor and material furnished in the performance of work under this contract.

Final Payment.

Art. 33. The said Contractor further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials, except in the manner set forth in this contract, nor until all the stipulations, provisions, and conditions, hereinbefore mentioned are complied with, and the said Engineer shall have given his certificate to that effect; whereupon said Sanitary District will, at the expiration of thirty (30) days after such completion and delivery of such certificate pay, and, it hereby binds itself to pay the said Contractor in cash, the whole amount of money accruing to said Contractor under this contract, except such sum or sums of money as may have been already paid and as may be lawfully retained under any of the provisions of this contract herein set forth.

This agreement shall be binding upon the successors, heirs and legal representatives of said Contractor.

In Witness Whereof, on the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its..... to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Committee on Finance.

James B. Sackley Company. (Seal)
By James B. Sackley. (Seal)

Attest:
L. F King,
Clerk.

Attest:
Thos. J. Rigney,
Secretary.

Approved Sept. 4, 1919.
Ralph H. Burke,
Division Engineer.

.....
Chief Engineer.

Charles E. Anthony,
Assistant Attorney.

C. Arch. Williams,
Attorney.

Contractor's Bond.

KNOW ALL MEN BY THESE PRESENTS, That we, the James A. Sackley Compan, as principal, and John B. Sackley and Thomas J. Rignely, as sureties, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Eleven Thousand Six Hundred Dollars and No Cents ($11,600.00), lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals, and dated this 4th day of September, A. D. 1919.

THE CONDITION OF THE ABOVE OBIGATION IS SUCH, That whereas the above bounden James A. Sackley Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 4th day of September, A. D 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for paving the Blue Island and Riverdale Road in the City of Chicago, County of Cook, State of Illinois, as specified in the foregoing contract.

Now, if the said James A. Sackley Company shall in all respects well and truly keep and perform the said contract on its part in accordance with the terms thereof, and specifications therein contained, and the plans accompanying the same, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages, expenses and attorney's fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, or which may in anywise result from the carelessness or neglect of said James A. Sackley Company, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to the said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for first aid, medical, surgical and hospital attendance and compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or deaths suffered in the course of employment, approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, which may accrue to each and every person who shall be employed by said James A. Sackley Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person and shall repay any overpayment, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment, rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said James A. Sackley Company or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Aribitrators or of the State Industrial Board of the State of Illinois rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, relating to compensation for accidental injuries or deaths suffered by employes, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said James A. Sackley Company, shall be conclusive against each and all parties to this obligation,

as to amount, liability and all other things pertaining thereto.

JAMES B. SACKLEY COMPANY. (Seal)

By JAMES B. SACKLEY. (Seal)
JAMES B. SACKLEY. (Seal)
THOMAS J. RIGNEY. (Seal)

Attest:
THOMAS J. RIGNEY.

Approved as to form September 4, A. D. 1919:
CHARLES E. ANTHONY,
Assistant Attorney.
C. ARCH. WILLIAMS,
Attorney.

TEMPORARY CHAIRMAN.

President Sergel called Mr. Healy to the chair, and took a chair on the floor of the Board room.

MISCELLANEOUS AND NEW BUSINESS.

President Sergel presented the following resolution:

Resolved, That the highway to be constructed by the Sanitary District along the North Shore Channel be named the McCormick Road, in honor of the former President of the Board, Col. Robert R. McCormick.

(CHARLES H. SERGEL.)

President Sergel moved that the resolution be adopted.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

ADJOURNMENT.

Mr. Lawley moved that the Board adjourn.

The motion prevailed.

Clerk.

628.09773
C43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING.

THURSDAY, SEPTEMBER 18, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District Chicago.

President Sergel took the chair and, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

SUSPENSION REGULAR ORDER OF BUSINESS.

Trustee Clark moved to suspend the regular order of business for the purpose of introducing a report from the Committee on Engineering preliminary to the opening of the bids for the North Shore Channel Highway, as follows:

CHICAGO, September 18, 1919.

To the Honorable, The President, and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on September 4, 1919 (page 1131 of the Proceedings), approved a report of the Chief Engineer in which he recommended the construction of a heavy traffic highway upon the right-of-way

of the North Shore Channel of The Sanitary District, along a route which extends between Lawrence Avenue, Chicago, and a point in Sheridan Road in the Village of Wilmette.

Your Committee further reports that it examined and approved the plans and specifications prepared by the Chief Engineer for the construction of said highway and in order that said work might proceed as rapidly as possible directed that said work be advertised so that bids could be received and opened at the meeting of the Board to be held September 18, 1919.

Your Committee, therefore, recommends the passage of the following order:

Orered, That the plans and specifications prepared by the Chief Engineed for the construction of the Highway above specified be and the same are hereby approved and it is further

Ordered, That the action of the Committee on Engineering, in directing that the work above specified be advertised, be and the same is hereby ratified and confirmed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

REGULAR ORDER OF BUSINESS.

Bids.

The Clerk announced that the bid of the Warner Construction Company was received at 12:07 P. M., seven minutes after the closing time for the receipt of bids.

President Sergel stated that under the advertisement the only bids that can be entertained were those received up until 12 o'clock noon.

Trustee Clark moved that all bids be opened and that they be referred to the Engineering Committee to make report on all the physical conditions surrounding the bids, at which time the Committee will take into consideration the fact that said bid was received at 12:07 o'clock P. M.

The motion prevailed.

The Clerk opened and read the bids received for the North Shore Channel Highway as shown in the schedule printed on page 1154-A of the Proceedings.

Mr. Clark moved that the bids be referred to the Chief Engineer for tabulation and to the Chief Engineer for report.

The motion prevailed.

REPORTS OF OFFICERS.

The Clerk presented the report of the Treasurer for the month of August, 1919, which was ordered published and filed, as follows:

THE SANITARY DISTRICT OF CHICAGO

NORTH SHORE CHANNEL HIGHWAY—ITEMIZED TABULATION OF BIDS

Bids opened September 18, 1919

		Ready & Callaghan	Contracting & Material Company	James A. Sackley Co.	Mellon, Stuart, Nelson Company	Marquette Construction Company	Paschen Bros.	Warner Construction Company
Name of Bidder								
Address of Bidder		Chicago	Chicago	Chicago	Chicago	Chicago	Chicago	Chicago 12.07
Amount of Deposit		$ [illegible],000.00	$28,000.00	$28,000.00	$28,000.00	$28,000.00	$28,000.00	$7,000.00
In Order Received		1	5	3	6	4	2	7
In Order of Magnitude		1	2	3	4	5	6	7

	ITEMS	Quantities	Prices Unit	Prices Total	Prices Unit	Prices Total	Prices Unit	Prices Total	Prices Unit	Prices Total	Prices Unit	Prices Total	Prices Unit	Prices Total	Prices Unit	Prices Total
CONTRACT SECTION 1	(1) Excavation	16,000 cu. yds.			$ .60	$ 9,600.00	$ .90	$ 14,400.00			$ 1.40	$ 22,400.00			$ 1.00	$ 16,000.00
	(2) Embankment	27,000 cu. yds.			.60	16,200.00	.90	24,300.00			1.40	37,800.00			1.00	27,000.00
	(3) Broken Stone Shoulders	9,900 sq. yds.			1.60	15,840.00	1.68	16,632.00			2.50	24,750.00			1.90	18,810.00
	(4) Broken Stone Pavement				1.60		2.00				2.40				1.90	
	(5) Portland Cement Concrete Pavement	44,500 sq. yds.			3.38	150,410.00	3.53	157,085.00			3.40	151,300.00			4.49	199,805.00
	(6) Wire Mesh Reinforcement	44,000 sq. yds.			.25	11,000.00	.18	7,920.00			.20	8,800.00			.27	11,880.00
	(7) Class "A" Concrete	600 cu. yds.			26.00	15,600.00	25.00	15,000.00			20.00	12,000.00			44.00	26,400.00
	(8) Reinforcing Steel	192,000 lbs.			.09	17,280.00	.045	8,640.00			.04	7,680.00			.06	11,520.00
	(9) 12" Clay Pipe Underdrain	300 lin. ft.			1.20	360.00	.90	270.00			3.10	930.00			1.30	390.00
	(10) 18" Vitrified Pipe Underdrain				2.28		3.00				4.00				3.00	
	(11) Integral Concrete Curb	2,000 lin. ft.			.30	600.00	.65	1,300.00			.30	600.00			.96	1,920.00
	(12) Guard Fence	4,700 lin. ft.			.80	3,760.00	.85	3,995.00			.80	3,760.00			.76	3,572.00
	(13) 12" Catch Basins	1			25.00	25.00	25.00	25.00			40.00	40.00			8.50	8.50
	(14) Overhaul (1,000 ft. Free Haul)	Per yd. per 100 ft.			.05		.02				.02				.02	
	(15) Portland Cement Concrete Pavement	44,500 sq. yds.			2.30	102,350.00	2.54	113,030.00			2.30	102,350.00			3.29	146,405.00
	(16) Class "A" Concrete	600 cu. yds.			23.10	13,860.00	23.00	13,800.00			17.00	10,200.00			40.00	24,000.00
	(17) Integral Concrete Curb	2,000 lin. ft.			.25	500.00	.60	1,200.00			.25	500.00			.90	1,800.00
	[illegible]					$ 40,675.00		$ 29,567.00				$ 27[illegible].00				$ 317,305.50
	Total for Alternative Proposal					$ 190,775.00		$ 204,212.00				$ 219,210.00				$ 261,385.50
CONTRACT SECTION 2	(1) Excavation	17,000 cu. yds.			$ .60	$ 10,200.00	$ .90	$ 15,300.00			$ 1.40	$ 23,800.00				
	(2) Embankment	28,000 cu. yds.			.60	16,800.00	.90	25,200.00			1.40	39,200.00				
	(3) Broken Stone Shoulders	10,900 sq. yds.			1.60	17,440.00	1.68	18,312.00			2.50	27,250.00				
	(4) Broken Stone Pavement				1.60		2.00				2.40					
	(5) Portland Cement Concrete Pavement	41,600 sq. yds.			3.34	138,944.00	3.54	147,264.00			3.40	141,440.00				
	(6) Wire Mesh Reinforcement	41,200 sq. yds.			.25	10,300.00	0.18	7,416.00			.20	8,240.00				
	(7) Class "A" Concrete	600 cu. yds.			25.00	15,000.00	25.00	15,000.00			20.00	12,000.00				
	(8) Reinforcing Steel	192,000 lbs.			.09	17,280.00	.045	8,640.00			.04	7,680.00				
	(9) 12" Clay Pipe Underdrain	420 lin. ft.			1.20	504.00	.90	378.00			3.10	1,302.00				
	(10) Integral Concrete Curb	2,600 lin. ft.			.29	754.00	.65	1,690.00			.30	780.00				
	(11) Guard Fence	4,300 lin. ft.			.80	3,440.00	.85	3,655.00			.80	3,440.00				
	(12) Overhaul (1,000 ft. Free Haul)	Per yd. per 100 ft.			.05		.02				.02					
	(13) Portland Cement Concrete Pavement	41,600 sq. yds.			2.26	94,016.00	2.55	106,080.00			2.30	95,680.00				
	(14) Class "A" Concrete	600 cu. yds.			23.10	13,860.00	23.00	13,800.00			17.00	10,200.00				
	(15) Integral Concrete Curb	2,600 lin. ft.			.24	624.00	.60	1,560.00			.25	650.00				
	Total					$ 230,662.00		$ 242,855.00				$ 265,132.00				
	[illegible] for Alternative Proposal					$ 184,464.60		$ 200,341.00				$ 217,41[illegible].00				
CONTRACT SECTION 3	(1) Excavation	14,000 cu. yds.			$ .60	$ 8,400.00	$ .90	$ 12,600.00			$ 1.40	$ 19,600.00				
	(2) Embankment	28,000 cu. yds.			.60	16,800.00	.90	25,200.00			1.40	39,200.00				
	(3) Broken Stone Shoulders	9,000 sq. yds.			1.60	14,400.00	1.68	15,120.00			2.50	22,500.00				
	(4) Broken Stone Pavement				1.60		2.00				2.40					
	(5) Portland Cement Concrete Pavement	38,000 sq. yds.			3.34	126,920.00	3.55	134,900.00			3.40	129,200.00				
	(6) Wire Mesh Reinforcement	37,600 sq. yds.			.25	9,400.00	.18	6,768.00			.20	7,520.00				
	(7) Class "A" Concrete	680 cu. yds.			25.00	17,000.00	25.00	17,000.00			20.00	13,600.00				
	(8) Reinforcing Steel	34,000 lbs.			.09	15,446.00	.045	9,720.00			.04	8,610.00				
	(9) 12" Clay Tile Underdrain	460 lin. ft.			1.20	552.00	.90	414.00			3.10	1,426.00				
	(10) Integral Concrete Curb	2,400 lin. ft.			.29	696.00	.65	1,560.00			.30	720.00				
	(11) Guard Fence	4,800 lin. ft.			.80	3,840.00	.85	4,080.00			.80	3,840.00				
	(12) 12" Catch Basins	6			25.00	150.00	25.00	150.00			40.00	240.00				
	(13) 18" Catch Basins	[illegible]			[illegible].00		30.00				50.00					
	(14) Stone Chimneys	2			15.00	30.00	15.00	30.00			5.00	10.00				
	(15) Overhaul (1,000 ft. Free Haul)	Per yd. per 100 ft.			.05		.02				.02					
	(16) Portland Cement Concrete Pavement	38,000 sq. yds.			2.26	85,880.00	2.56	97,280.00			2.30	87,400.00				
	(17) Class "A" Concrete	680 cu. yds.			22.10	15,028.00	23.00	15,640.00			17.00	11,560.00				
	(18) Integral Concrete Curb	2,460 lin. ft.			.24	576.00	.60	1,440.00			.25	600.00				
	Total					$ 21[illegible].00		$ 227,342.00				$ 250,196.00				
	[illegible] for Alternative Proposal					$ 1[illegible],446.00		$ 188,442.00				$ 20[illegible].536.00				
CONTRACT SECTION 4	(1) Excavation	5,000 cu. yds.			$ .60	$ 3,000.00	$ .80	$ 4,000.00			$ 1.40	$ 7,000.00				
	(2) Embankment	22,000 cu. yds.			.60	13,200.00	.80	17,600.00			1.40	30,800.00				
	(2) Broken Stone Shoulders	3,200 sq. yds.			1.60	5,120.00	1.68	5,376.00			2.50	8,000.00				
	(3) Broken Stone Pavement				1.60		2.00				2.40					
	(5) Portland Cement Concrete Pavement	45,900 sq. yds.			3.34	153,306.00	3.62	166,158.00			3.40	156,060.00				
	(6) Wire Mesh Reinforcement	45,400 sq. yds.			.25	11,350.00	.18	8,172.00			.20	9,080.00				
	(7) Class "A" Concrete	320 cu. yds.			25.00	8,000.00	25.00	8,000.00			20.00	6,400.00				
	(8) Reinforcing Steel	104,000 lbs.			.09	9,360.00	.045	4,680.00			.04	4,160.00				
	(9) 12" Vitrified Pipe Underdrain	10,000 lin. ft.			1.39	13,900.00	1.25	12,500.00			3.35	33,500.00				
	(10) 18" Vitrified Pipe Underdrain	9,000 lin. ft.			2.26	20,340.00	3.00	27,000.00			4.00	36,000.00				
	(11) Integral Concrete Curb	13,000 lin. ft.			.29	3,770.00	.65	8,450.00			3.30	3,900.00				
	[illegible] Guard Fence	[illegible],000 lin. ft.			.80	7,760.00	.85	8,245.00			.80	7,760.00				
	(13) 12" Catch Basins	30			25.00	750.00	25.00	750.00			40.00	1,200.00				
	(14) 18" Catch Basins	36			31.00	1,116.00	30.00	1,080.00			50.00	1,800.00				
	(15) Stone Chimneys	5			15.00	75.00	15.00	75.00			5.00	25.00				
	(16) Overhaul (1,000 ft. Free Haul)	Per yd. per 100 ft.			.05		.02				.02					
	(17) Portland Cement Concrete Pavement	45,900 sq. yds.			2.26	103,734.00	2.63	120,717.00			2.30	105,570.00				
	(18) Class "A" Concrete	320 cu. yds.			22.10	7,072.00	23.00	7,360.00			17.00	5,440.00				
	(19) Integral Concrete Curb	13,000 lin. ft.			.24	3,120.00	.60	7,800.00			.25	3,250.00				
	Total					$ 251,047.00		$ 272,086.00				$ 305,685.00				
	Total for Alternative Proposal					$ 199,897.00		$ 225,355.00				$ 253,585.00				
CONTRACT SECTIONS 1 to 4, Inclusive as an Entirety	(1) Excavation	52,000 cu. yds.	$ .75	$ 39,000.00	$ .60	$ 31,200.00			$ 1.25	$ 65,000.00	$ 1.40	$ 72,800.00	$ .44	$ 22,880.00		
	(2) Embankment	105,000 cu. yds.	.20	21,000.00	.60	63,000.00			1.25	131,250.00	1.40	147,000.00	.88	92,400.00		
	(3) Broken Stone Shoulders	33,000 sq. yds.	1.60	52,800.00	1.60	52,800.00			1.50	49,500.00	2.50	82,500.00	1.50	49,500.00		
	(4) Broken Stone Pavement		1.60		1.60				2.00		2.40		3.80			
	(5) Portland Cement Concrete Pavement	170,000 sq. yds.	3.14	533,800.00	3.35	569,500.00			3.25	552,500.00	3.40	578,000.00	4.33	744,600.00		
	(6) Wire Mesh Reinforcement	168,200 sq. yds.	.20	33,640.00	.25	42,050.00			.33	55,506.00	.20	33,640.00	.25	42,050.00		
	(7) Class "A" Concrete	2,200 cu. yds.	20.00	44,000.00	25.00	55,000.00			20.00	44,000.00	20.00	44,000.00	26.50	58,300.00		
	(8) Reinforcing Steel	704,000 lbs.	.05	35,200.00	.09	63,360.00			.08	56,320.00	.04	28,160.00	.05	35,200.00		
	(9) 12" Clay Pipe Underdrain	1,180 lin. ft.	1.00	1,180.00	1.20	1,416.00			1.75	2,065.00	3.35	3,953.00	1.75	2,065.00		
	(10) 18" Vitrified Pipe Underdrain	9,000 lin. ft.	1.30	11,700.00	2.28	20,520.00			3.00	27,000.00	4.00	36,000.00	3.00	27,000.00		
	(11) 12" Clay Tile Underdrain	10,000 lin. ft.	1.20	12,000.00	1.20	12,000.00			2.00	20,000.00	3.10	31,000.00	1.75	17,500.00		
	(12) Integral Concrete Curb	20,000 lin. ft.	.45	9,000.00	.29	5,800.00			2.00	40,000.00	.30	6,000.00	.85	17,000.00		
	(12) Guard Fence	23,500 lin. ft.	.70	16,450.00	.80	18,800.00			1.50	35,250.00	.80	18,800.00	.88	20,680.00		
	(14) 12" Catch Basins	37	20.00	740.00	25.00	925.00			75.00	2,775.00	40.00	1,480.00	20.00	740.00		
	(15) 18" Catch Basins	36	25.00	900.00	31.00	1,116.00			100.00	3,600.00	50.00	1,800.00	24.00	864.00		
	(16) Stone Chimneys	7	3.00	21.00	15.00	105.00			5.00	35.00	5.00	35.00	30.00	210.00		
	(17) Overhaul (1,000 ft. Free Haul)	Per yd. per 100 ft.	.15		.05				.03		.02		.08			
	(18) Portland Cement Concrete Pavement	170,000 sq. yds.	2.04	346,800.00	2.27	385,900.00			2.35	399,500.00	2.30	391,000.00	3.17	538,900.00		
	(19) Class "A" Concrete	2,200 cu. yds.	15.63	34,420.00	22.10	48,620.00			17.50	38,500.00	17.00	37,400.00	23.67	52,074.00		
	(20) Integral Concrete Curb	20,000 lin. ft.	.35	7,000.00	.29	5,800.00			1.75	35,000.00	.25	5,000.00	.80	16,000.00		
	[illegible]			$ [illegible],[illegible].00		$ [illegible],[illegible].00				$ 1,081,801.00		$ 1,087,168.00		$ 1,130,989.00		
	Total for Alternative Proposal			$ 612,861.00		$ 747,612.00				$ 921,301.00		$ 890,568.00		$ 918,063.00		

THE SANITARY DISTRICT OF CHICAGO—TREASURER'S REPORT FOR SEPTEMBER, 1919.

Receipts.

Balance on hand at date of last report		$ 368,481.29
Electrical Department (Working Capital)	$ 76,964.37	
Land Revenue	5,826.90	
Water Service	1,633.33	
County Collector	750,000.00	
John McGillen, Clerk	20,000.00	
Bills Receivable (United States Crushed Stone Co.)	666.66	
Interest (Int. on City of Berwyn Elec. Light Bonds)	250.00	
Sundry Accounts Receivable	235.90	
Taxes on District Property	53.45	
Miscellaneous Engineering Operating Expense	32.97	
Illinois & Mich. Canal & Ill. River Con. Dept	16.67	
Law Department	1.00	
General Account	.35	
Interest on Deposits (Geo. M. Reynolds, Treas.)	885.05	
Interest on Deposits (Clerks' Emergency Fund)	21.26	
Total cash received for month		856,587.91
		$1,225,069.20

Expenditures.

Engineering Department, Construction Account	$231,290.57	
Engineering Department, Maintenance and Operation Account	39,845.56	
Illinois & Michigan Canal and Illinois River Con. Dept.	3,854.67	
Law Department	9,123.55	
Cost of Law Cases	1,015.37	
Clerical Department	3,344.30	
Treasury Department	208.32	
Real Estate Department	175.27	
Police Department	6,426.22	
General Account	14,861.70	
Electrical Department	95,931.69	
Interest and Premium on Bonds	3,840.00	
Sundry Accounts Receivable	163.20	
Total cash disbursed		411,080.42
Balance on hand this date		813,988.78
		$ 1,225,069.20

Chicago, September 18, 1919.

G. M. REYNOLDS,
Treasurer.
By J. R. WASHBURN,
Asst. Treasurer.

The Clerk presented his report of the receipt of $855,681.60 during the month of August, 1919, and the receipt of the Treasurer therefor, which was ordered published and filed, as follows:

CHICAGO, September 11, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of eight hundred fifty-five thousand, six hundred eighty-one and sixty hundredths ($855,681.60) dollars during the month of August, 1919, from the following sources:

Harry R. Gibbons, County Collector, account 1918 taxes	$750,000.00
John McGillen, Clerk, being return of his emergency fund which was deposited with George M. Reynolds, Treasurer	20,000.00
South Side Elevated R. R. Company for rental for water privileges from 39th street conduit for months of March and April, 1919	1,633.33
United States Crushed Stone Company, in payment of judgment notes due July 2nd and August 2, 1919	666.66
George M. Reynolds, Treasurer, proceeds of 40 interest coupons clipped from 40 City of Berwyn electric light bonds	250.00
Sundry persons, for various telephone calls	236.25
Coal Products Mfg. Company, in payment of 1918 taxes on District property leased by the Western United Gas & Electric Company	53.45
L. F. King, Clerk, being refund of amount overpaid to Patrick J. Whalen, Rodman	27.82
L. F. King, Clerk, being refund of amount overpaid to James J. McDonald, Rodman	16.67
Wm. T. Lynch, Record Clerk, being amount received from sundry persons for personal telephone tolls	5.15
Joseph H. Brinker, being refund of amount overpaid for subscription for Congressional Record	1.00
Peoples Gas Light & Coke Company, for semi-annual rental from August 1, 1919, to January 31, 1920, for lots 39, 41, 43, 45, 47 and 49 on Main Channel	2,738.00
The Texas Company, for semi-annual rental to April 1, 1920 of 35.98 acres of land along Main Channel in Will County	1,799.00
City of Chicago, being rental for the months of March, April and May, 1919, for land leased to the Illinois Stone Company	525.00
Peter Bulthius, amount received being annual rental for the year 1919 for 33.195 acres in tract 130-B, Main Channel, under lease dated February 11, 1915 (page 140 of the Proceedings of 1915)	331.95
H. Schuringa, amount received for annual rental of land for year 1919, sub-leased from Henry Hook, covering 20 acres in tract 130-A, Main Channel, under lease dated January 21, 1915 (page 76 of the Proceedings)	200.00
Van Fleet Shops, being rental for months of December, 1918, and January, 1919, for premises located at No. 1 Jefferson street, Joliet, Ill.	150.00
Lola B. Willis, for annual rental of 5.51 acres of land along Calumet-Sag Channel	27.55
J. A Budlong, for 2.73 yards of spoil from the North Shore Channel at 10 cents per yard	27.30
Martin Polarek, for balance due to cover rental to July 1, 1920, for piece of land between the Main Channel and Illinois and Michigan Canal	15.00
Fred Krumbide, being rental for the years 1918 and 1919 of 1.21 acres of land 402 feet north and 125 feet east of the center of Sections 34-37-13	12.10
City of Chicago, in consideration for extension of lease for land subleased from Illinois Stone Company	1.00
Sundry Consumers, for electric power and light	$ 61,417.57

City of Chicago—
For power and light for months of November and December, 1918, and May and June, 1919 ..... $2,927.29
For interest and depreciation for months of November and December, 1918, and May and June, 1919 ..... 40.51
2,967.80

South Park Commissioners, for power and light for month of June, 1919 ..... 2,842.67

State of Illinois, for power and light for months of May, June and July, 1919 ..... 2,213.55

Commissioners of Lincoln Park—
For power and light for month of June, 1919 ..... $1,637.63
For interest and depreciation for month of June, 1919 ..... 69.45
1,707.08

County of Cook—
For power and light for month of May, 1919 ..... $1,280.74
For interest and depreciation for month of May, 1919 ..... 25.00
1,305.74

Village of Forest Park—
For power and light for months of March and April, 1919 ..... $ 895.21
For interest and depreciation for months of March and April, 1919 ..... 130.95
1,026.16

Village of Dolton—
For power and light for month of June, 1919 ..... $ 736.40
For interest and depreciation for month of June, 1919 ..... 18.65
On account 150.00
905.05

Town of Cicero, for power and light for month of June, 1919 ..... 499.80

Village of Summit—
For power and light for month of June, 1919 ..... $ 337.67
For interest and depreciation for month of June, 1919 ..... 32.98
370.65

Village of Melrose Park—
For power and light for month of May, 1919 ..... $ 247.34
For interest and depreciation for month of May, 1919 ..... 59.46
306.80

Village of Evergreen Park—
For power and light for month of June, 1919 ..... $ 190.19
For interest and depreciation for month of June, 1919 ..... 26.87
217.06

City of Berwyn—		
For power and light for month of June, 1919...$ 156.95		
For interest and depreciation for month of June, 1919 ..... 15.00		
	171.95	
War Camp Community Service, for power and light for months of June and July, 1919.....	146.40	
Village of Wilmette, for power and light for month of June, 1919	126.90	
Village of Bellwood--		
For power and light for months of June and July, 1919 .....$ 34.34		
For interest and depreciation for months of June and July, 1919..... 49.22		
	83.56	
Village of Stickney, for power and light for months of April and June, 1919.....	20.76	
Wilmette Park District, for power and light for months of June and July, 1919.....	16.07	
City of Blue Island, for power and light for month of June, 1919	3.79	
Forest Park Amusement Company, for replacing primary wires at amusement park.....	299.83	
Sundry Power Consumers, rental of meters for August, 1919	142.00	
Beverly Country Club, for maintenance of line and equipment	66.59	
Chicago Union Station Company, for changing cable in Harrison street and lowering city water main.....	54.05	
L. H. Lemont Company, cost of setting up transformer.....	41.69	
R. W. Faupel, account personal telephone tolls.....	2.10	
R. Young, installation of service.....	1.50	
American Express Company, installation of service.....	1.50	
C. Knapp, installation of service.....	1.50	
E. H. Johnson, installation of service.....	1.50	
A. Jacobin, installation of service.....	1.50	
J. Finneran, account personal telephone tolls.....	1.00	
A. Storge, account personal telephone tolls.....	.25	
		76,964.37
Grand total		$855,681.60

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by the attached receipt.

Respectfully submitted,

L. F. KING,
Clerk.

$855,681.60

CHICAGO, September 11, 1919.

Received from L. F. King, Clerk, the sum of eight hundred fifty-five thousand six hundred eighty-one and sixty hundredths ($855,681.60) dollars on the dates and in amounts as follows:

August 1		$ 3,705.91
August 2		4,650.92
August 4		31.06
August 5		18.47
August 6		315.10
August 7		136.78
August 8		999.99
August 9		857.87
August 11		130.87
August 12		1,428.51
August 13		6,712.42
August 14	$ 2,533.97	
August 14	750,000.00	
		752,533.97
August 15	$ 20,000.00	
August 15	2,429.36	
		22,429.36
August 16		5,907.86
August 18		2,296.63
August 19	x	8,929.57
August 20		9,771.51
August 21		6,956.99
August 22	$ 786.86	
August 22	2,328.59	
		3,115.45
August 23		1,146.93
August 25		566.97
August 26		2,218.01
August 27	$ 27.01	
August 27	$ 15,563.90	
		15,590.91
August 29		169.44
August 30	$ 531.95	
August 30	948.50	
August 30	250.00	
August 30	3,329.65	
		5,060.10
Total		$855,681.60

To be deposited to the credit of The Sanitary District of Chicago, and of the following accounts:

County Collector	$750,000.00
Electrical Department Working Capital	76,964.37
John McGillen, Clerk	20,000.00
Land Revenue	5,826.90
Water Service	1,633.33
Bills Receivable (United States Crushed Stone Co.)	666.66
Interest (Interest on City of Berwyn Electric Light Bonds)	250.00
Sundry Accounts Receivable	235.90
Taxes on District Property	53.45
Miscellaneous Engineering Operating Expense	32.97
Illinois and Michigan Canal and Illinois River Conditions Department	16.67
Law Department	1.00
General Account	.35
	$855,681.60

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

The Clerk presented the report of the Chief Engineer for the month of May, 1919, which was ordered published and filed, as follows:

CHICAGO, June 1, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I herewith present the report of the Engineering Department for the month of May, 1919, giving the detailed operations of the same.

CONSTRUCTION.

NORTH SHORE CHANNEL.

Spoil Banks.

The National Brick Company removed 10,920 cubic yards of material from the south spoil bank, between Brown street and W. Railroad avenue, during the month.

CONTRACT FOR SLOPING BANKS.

No work was done on this contract during the month.

CALUMET-SAG CHANNEL.

Section 1.

James O. Heyworth, Contractors, continued operation throughout the month. Drag line No. 2, on the south berm, was engaged in excavating dam at Main Channel, between M. C. Stations 969+00 and 972+75, from the 1st to the 31st, working one 12-hour shift per day. Locomotive Crane, on the north berm was engaged in excavating dam at I & M Canal Station 9+50 from the 1st to the 24th, working one 10-hour shift per day; Placing forms for connecting Main Channel walls with Calumet-Sag walls on the 26th and 27th; Hoisting concrete from the 28th to the 31st, at Station 969+00, working one 10-hour shift per day. Derrick No. 1 on the south berm, was engaged in cleaning up, at station 20+50 from the 1st to 31st. Concrete mixer on the north berm, at station 969+00 engaged in mixing concrete for connection of Main Channel and Calumet-Sag Channel walls from the 28th to the 31st, working one 10-hour shift per day. Miscellaneous work was carried on as follows: Digging outfall ditch at Archer Road on the 1st and 2nd. General cleanup from the 1st to the 17th. Patching walls on the 5th, 10th, to 14th. Dismantling and storing machinery from the 5th to 17th. Building forms on the 26th and 27th. Digging holes for snubbing posts, west wall of Main Channel was carried on, on the 29th by force account.

An average daily force of 39 men was employed. At the end of the month 93.8 per cent of the total estimated value of the contract was completed.

E. A. Hanrahan, Contractor for removing flume at station 69+50 employed a small force of men in removing flume from the 1st to the 10th and 20th to 28th, on which date this work was completed.

Section 2.

E. A. Hanrahan, Contractor employed an average daily force of 5.3 men in cleaning outfall ditch and placing 24-inch tile at station 112+25, on north side of channel, from the 12th to the 16th, on which date the work on this section was completed.

Section 3.

E. A. Hanrahan, Contractor for cleaning ditches, etc., on this section, employed an average daily force of 4.9 men cleaning outfall ditch, station 137+00 and hauling and placing tile, from the 19th to the 29th. Truck was engaged in hauling tile on the 17th, 19th and 28th on force account basis. Work completed on this section on the 29th.

Section 4.

E. A. Hanrahan, Contractor for cleaning outfall ditch on this section, employed an average daily force of

4.3 men in cleaning outfall ditch, station 204+00, on the 17th and 19th, on which date the work was completed.

Section 13.

A. Guthrie & Co., Inc., Contractors, continued operations throughout the month. Steam Shovel No. 2 was engaged in excavating rock and glacial drift in channel between stations 759+50 and 757+10, from the 5th to the 12th, working one 10-hour shift per day. Steam shovel No. 3 was engaged in excavating glacial drift in channel between stations 761+00 and 761+81 from the 23rd to the 25th, working one 10-hour shift per day and on the 27th and 28th, working an average of 4 hours per day, and hoisting concrete for walls on the 27th and 28th, working an average of 6 hours per day. Two dinky engines and 4 dump cars, in cut, were engaged in hauling spoil from shovel No. 2 to south wall between stations 765+00 and 777+00 from the 5th to the 12th and 23rd to the 25th, working one 10-hour shift per day and on the 27th and 28th working an average of 4 hours per day. Three dinky engines and 6 dump cars were engaged in hauling concrete from the mixer to the C. R. I. & P. Ry. abutment on the 1st to the 2nd, working one 9-hour shift per day; on the 5th working two hours; on the 8th and 9th working one 7-hour shift per day. Hauling concrete to retaining walls from the 13th to the 16th working one 7-hour shift per day, and on the 21st and 22nd, working one 10-hour shift per day, and from the 26th to the 31st working one 5-hour shift per day; Hauling concrete to sector gates on section 14 on the 17th and 19th, working one 10-hour shift per day. Hauling concrete to Chicago street abutment on the 19th, 23rd and 24th, working one 10-hour shift per day. 2 concrete mixers were engaged in mixing concrete as noted above. Pumping channel was carried on at station 757+50 from the 1st to the 31st, working an average of 6½ hours per day. At station 782+00 on the 4th, working one 10-hour shift and on the 23rd working one 2-hour shift and on the 29th working one 3-hour shift. Traveler No. 1 on the north wall was engaged in building forms for wall between stations 760+25 and 759+75 on the 2nd, 5th to 9th, 16th, 17th, 26th, 31st, working one 10-hour shift per day. Concreting on the 22nd, 23rd working one 10-hour shift per day and on the 27th working one 5-hour shift. Traveler No. 2 on south wall was engaged in building forms between stations 760+90 and 758+96 from the 10th to the 14th, 18th, 20th, 23rd to 24th, 27th and 28th, working one 10-hour shift per day; concreting on the 15th, 16th, 21st, 22nd, 26th, working one 10-hour shift per day and on the 29th and 31st, working one 5-hour shift per day. Hand work was carried on as follows: Cleaning off rock for wall footings for south wall between stations 761+50 and 760+50 from the 1st to 11th, 760+46 and 759+96 on the 17th and station 758+46 and 759+12 on the 22nd and 23rd; for north wall between stations 760+50 and 761+00 from the 12th to 16th, stations 758+46 and 759+02 from the 27th to the 31st working one 10-hour shift per day. Leveling backfill between stations 766+00 and 777+00 from the 5th to the 12th, 23rd and 24th, working one 10-hour shift per day and on the 27th and 28th, working one 4-hour shift. Building wood concrete forms between stations 760+90 and 761+81 for south wall from the 7th to the 12th. Concreting same on the 13th and 14th. Building forms for north wall between stations 760+25 and 761+81 from the 17th to the 19th, 25th to 27th, concreting same on the 20th, 21st, and 28th. An average daily force of 71.1 men was employed. At the end of the month 61.8 per cent of the total estimated value of the contract was completed.

Section 14.

A. Guthrie & Co., Inc., Contractors continued operations throughout the month. Steam shovel No. 5 on the north berm was engaged in excavating spoil from spoil bank on the 1st and 2nd, 5th to the 30th, between stations 814+00 and 806+00, working one 10-hour shift per day. Two dinky engines and 16 dump cars were engaged in hauling spoil from shovel No. 5 to north wall between stations 800+00 and 870+00, from the 5th to the 9th, 13th to 22nd, and to Ashland avenue from the 10th to the 12th, for approach, working one 10-hour shift per day. Three dinky engines and 16 dump cars were engaged in hauling spoil from shovel No. 5 to north wall between stations 794+00 and 802+00 and the south wall between stations 805+00 and 815+00 from the 23rd to the 30th, working one 10-hour shift per day. One dinky engine and 2 dump cars were engaged in hauling stone to cover roof of sewage discharge chamber on the 13th, working one 10-hour shift. Hauling stone to Ashland avenue approach from the 16th to the 19th, working one 10-hour shift per day. One dinky engine was engaged in syphoning water from sector gates from the 1st to the 10th and from the 22nd to the 26th, working one 10-hour shift per day. Pumping channel was carried on at station 846+00 from the 15th to the 27th, working one 10-hour shift per day and 28th to the 31st working one 7-hour shift per day. At station 737+00 from the 15th to the 31st, working one 12-hour shift per day. 3 Teams were engaged in leveling backfill behind walls from the 1st to the 12th, 22nd, 23rd, and 24th to the 31st between stations 800+00 and 815+00, working one 10-hour shift per day. Hand work was carried on as follows: Leveling backfill between stations 800+00 and 820+00 on the 1st, 2nd, 5th to the 9th, 13th to the 30th, working one 10-hour shift per day. An average daily force of 77.6 men was employed. At the end of the month 99.8 per cent of the total estimated value of the contract was completed.

BRIDGES.

Division Street Bridge.

The Kelly Atkinson Construction Company employed an average daily force of 6.5 men in painting bridge steel on the 2nd, 6th to the 8th, working one 10-hour shift per day.

A. Guthrie & Co. employed a force of 14 men digging drain ditch along roadway at the north end of this bridge on the 5th, working one 10-hour shift.

The Public Service Co. of Northern Illinois employed a force of 11 men and auto truck in replacing gas main on this bridge on the 26th, working a 4-hour shift.

Chicago Street Bridge.

A. Guthrie & Co. employed an average daily force in building concrete forms for the south abutment on the 2nd, 5 th and 6th, 13th and 14th building tower and chutes on the 7th; Concreting south abutment 19th, 20th, 23rd, 24th; Removing forms on 26th and 27th. Building forms for north abutment on the 28th, 29th and 31st.

C. R. I. & P. Ry. (Main Line) Bridge.

A. Guthrie & Co. employed an average daily force of 12 men building forms for east half of north abutment on the 1st and 2nd, working one 10-hour shift. Concreting same on the 5th, working 2 hours. Removing forms on the 6th and 7th. Excavating for concrete forms on east half of the north pier on the 5th, working one 8-hour shift. Building forms on the 6th and 7th, working one 10-hour shift. Concreting same on the 8th and 9th, working one 7½-hour shift per day. Removing forms on the 10th, working one 10-hour shift. An aver-

age daily force of 9.5 men was employed in excavating spoil between the north pin and the north abutment from the 12th to the 31st, working one 10-hour shift per day. The substructure was ready for the erection of steel work on bridge No. 3 on the 31st.

The C. R. I. & P. Ry. Co. employed an average daily force of 4.5 men in bracing water pipe line running along the R. I. right of way line because of excavation done by A. Guthrie & Co., from the 12th to the 17th, working an average of 5½ hours per day, on the 21st, and 23rd, working an average of 4 hours per day, on the 28th and 29th working one 8-hour shift per day.

The Overland Construction Co. employed an average daily force of 7 men loading material for bridge No. 3 on the 27th and unloading same at the bridge site on the 28th, Loading girders for same on the 29th and 31st working one 8-hour shift per day. Began placing castings for bridge superstructure on the 28th.

B. & O. and G. T. W. Bridges.

Pumping channel was carried on by A. Guthrie & Co. throughout the month at station 749+00, working an average shift of 11 hours per day. A. Guthrie & Co. employed an average daily force of 7 men excavating for mud sills, framing and placing trestle bents on the 1st, 2nd, 5th, 6th, 10th to 19th, 22nd, 23rd, 27th, and 28th. An average daily force of 9 men were engaged in excavating to place trestle bents from the 10th to the 12th, 15th to the 24th, 29th to the 31st, working one 10-hour shift per day. An average daily force of 8 men was employed in removing cribbing back of the south abutment of the B. & O. bridge on the 5th, 6th, 8th and 9th, working 9 and 8-hour shifts per day. An average daily force of 7 men was engaged in placing grillage forms and concreting same on the 6th and 7th. A force of 8 men was employed in unloading cinders and leveling same on future L. H. B. Ry. tracks north of channel from the 7th to the 9th. An average daily force of 6 men was employed in laying turnout from B. & O. track No. 2 for west bound B. & O. track to McCook line on the 14th, 15th, 19th, 29th and 31st. An average daily force of 12 men was employed in unloading timbers for B. & O. trestle on the 26th, 27th and 31st.

The Strobel Steel Construction Co. employed an average daily force of 9 men on the following work: Laying guard rail on B. & O. (McCook Line) trestle over channel on the 1st. Cleaning up for B. & O. Official inspection B. & O. Stoney Creek Bridge on the 2nd. Unloading cinders for I. H. B. Ry. future tracks on the 3rd. Surfacing tracks B. & O. (C. C. Div.) north of channel on the 5th and 6th. Moving wires to allow placing of floor section on the 7th. Moving pipe line and signal wires to temporary location a/c of new location of I. H. B. Ry. tracks from the 13th to the 15th and 23rd to the 24th. The aforementioned work was carried on in one 8-hour shift per day.

The Grand Trunk Western Ry. Co. employed an average daily force of 5 men in loading and unloading rails and material for G. T. W. track diversion on the 20th and 27th, working one 9-hour shift per day.

Ashland Avenue Bridge.

A. Guthrie & Co. employed an average daily force of 8 men working as follows: Building trestle for backfill on the 1st. Unloading screenings on the 2nd. Backfilling approaches on the 6th, 7th, 8th to the 13th. Spreading gravel for roadway from the 14th to the 19th. Tearing out temporary bridge from the 22nd to the 24th. Digging ditch for tile drain from the 29th to

the 31st, working one 10-hour shift per day.

Controlling Works.

A. Guthrie & Co. employed an average daily force of 6 men backfilling the Morgan Park Sewer from the 1st to the 31st. An average daily force of 10 men was employed removing old concrete floor at the sector gates on the 1st and 2nd to the 16th. Placing new floor on the 17th and 19th. Cleaning up for new concrete floor west sector gates from the 21st to the 28th, working one 10-hour shift per day.

The Sanitary District employed 1 man painting sector gate machinery houses on the 2nd, working one 8-hour shift.

Nichols Brothers, Electrical Contractors, employed an average daily force of 3 men as follows: Moving equipment from R. R. to site of work on the 14th, 22nd to the 24th, unpacking same from the 17th to the 21st, installing machinery from the 26th to the 31st, working one 8-hour shift per day.

Sewage Treatment Plant on North Branch of the Chicago River.

The Sanitary District Organization employed a force of 6 men loading tanks and other material on a scow at the Stock Yards Testing Station from the 25th to the 31st, preparatory to moving same to the vicinity of Halsted street and Chicago ave. where they are to be used in the new Tannery Testing Station, and a force of 3 men was engaged in building weirs and installing recording gauges at Montrose ave., Irving Park boulevard, Belmont ave., Diversey boulevard, Clybourn ave., Chicago ave., Kinzie st. and Blackhawk street, throughout the month.

Desplaines River Sewage Treatment Plant.

Leyden-Ortseifen Company, Contractor, commenced operations on the 9th and continued throughout the month. The work consisting of preliminary ditching and other items preparatory to the construction, the laying of water main and tile drains was also carried on during the month, an average daily force of 6 men was employed.

SEWERS.

CALUMET INTERCEPTING SEWER.

Contract Section No. 5.

Byrne Brothers Dredging and Engineering Company, Contractors, continued operations throughout the month. The work consisting of repairs to plant, building forms, laying construction track and other miscellaneous items. An average daily force of 14 men and 2 teams were employed.

Contract Section No. 6.

Byrne Brothers Dredging and Engineering Company, Contractors, continued operations throughout the month. The work consisting of grading streets, placing backfill on the Chicago Gun Club property, laying tile sewer in 116th street. The sewer was pumped out on the 19th and the work of cleaning the same was carried on from the 19th to the 31st. An average daily force of 56 men and one team were employed.

Evanston Intercepting Sewer.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work consisting of construction of manholes, making sewer connections, cleaning out of sewer in Custer avenue, cleaning and repairing streets and parkways in various locations. An average daily force of 21 men and 2 teams were employed.

Temporary Pumping Plant at Evanston.

Nash-Dowdle Company, Contractors- continued the operation of the pumps throughout the month. An average daily force of 3 men was employed.

Desplaines River Intercepting Sewer.

Nash Brothers, Contractors, continued operations throughout the month. The work consisting of the construction of the main line sewer in First avenue, in tunnel, between Madison and Lake streets and the construction of the Madison street line in tunnel. An average daily force of 93 men was employed. The work was 30.7 per cent completed at the end of the month.

PUMPING STATIONS.

Calumet Sewage Pumping Station.

T. J. Forschner, Contracting Company Contractors, continued operations throughout the month. The work consisting of placing concrete in the substructure of the station, placing reinforcing steel, anchor bolts, electrical conduits and other similar work. An average daily force of 96 men was employed. The work was 24.7 per cent completed at the end of the month.

Evanston Sewage Pumping Station.

Nash-Dowdle Company, Contractors, continued operations throughout the month. The work consisted of excavation and placing concrete in the substructure of the station. The manufacturing of the pumps, electrical equipment, valves, and piping was carried on in the various shops. An average daily force of 21 men was employed.

MAINTENANCE AND OPERATION.

MAIN CHANNEL.

Bridges.

The main channel repair force worked at the controlling works and 16th street Desplaines river Bridge on painting and repair work.

Controlling Works.

The Bear Trap Dam was open some part of seven days or a total of forty-seven hours, an average of one hour and thirty-one minutes for each day of the month.

The Sanitary District Organization employed a force of 4 men repairing, cleaning and painting window frames, flag pole, gates, doors, etc., at the Controlling Works, from the 16th to the 30th.

MAIN CHANNEL EXTENSION.

Walls.

The Sanitary District Organization employed an average daily force of 12 men from the 2nd to the 31st, repairing rafts, cleaning form lumber and cutting out disintegrating concrete, north of the 16th street bridge.

BRIDGES.

16th Street Bridge.

The Sanitary District Organization employed a force of 4 men from the 22nd to the 31st, in replacing posts and railings on the approach to this bridge and scraped the steel work preparatory to painting same.

Two men were on duty on the 9th and 16th street bridges, working from 7 a. m. to 3 p. m. and from 3 p. m. to 11 p. m.

Butterfly Dam.

This dam was operated on the 4th, 11th, 18th and 25th to ascertain its condition. On May 3rd light circuit was repaired and new rod made.

Dams at the Power House.

The Forty-Eight Foot Dam was open some part of ten days or a total of sixty-five hours and thirty-five minutes, an average of two hours and seven minutes for each day of the month. The Twelve Foot Dam was closed the entire month.

Samples of canal water were taken every eight hours for the Sanitary Division. A weather vane was installed on the 6th. The bell was repaired on the 8th. Three men were on duty working shifts of 8 hours each, throughout the month.

I. & M. Canal Lock at the Power House

15 boats passed through the lock

during the month. The lock was operated by the dam tender. The Lock circuit was repaired on the 8th. Dredging was done in front of the lock gates from the 26th to the 29th by the Electrical Department.

NORTH SHORE CHANNEL.

Outfall and Ditches.

The Sanitary District Organization employed a force of 8 men cleaning catch basins near the Wilmette Pumping Station from the 2nd to the 19th. Repairing the Laurel avenue sewer outfall from the 20th to the 23rd; Repairing the southwest ditch at Dempster street from the 24th to the 31st.

BRIDGES.

Kenilworth (Touhy) Avenue Bridge.

The Sanitary District Organization employed a force of 3 men laying the new floor on this bridge from the 1st to the 12th, on which date the bridge was opened to traffic. And a force of two men, in painting the steel work were engaged from the 1st to the 20th, on which date the painting was completed.

Church Street Bridge.

The Sanitary District Organization employed a force of 3 men on the work of underpinning the west abutment with concrete and trimming up the ditches west of the channel from the 12th to the 20th and 5 men from the 20th to the 31st. Tools and material were moved to the Dempster street bridge and a shanty was built. The work of underpinning the west abutment was begun on the 27th.

SEWAGE TREATMENT PLANTS.

Morton Grove Plant.

This plant was operated throughout the month and the regular maintenance and operation supervised by the Sanitary Division.

PUMPING STATIONS.

39th Street Pumping Station.

This station was operated, pumping sewage and some fresh water, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of sixteen days or a total of one hundred and sixteen hours and thirty-five minutes. Pump No. 2 some part of eighteen days or a total of three hundred and seven hours and fifty minutes. Pump No. 3 some part of fourteen days or a total of two hundred and three hours and forty-five minutes. Pump No. 4 some part of twenty-four days or a total of four hundred and fifteen hours and forty-five minutes. Screw pump No. 5 was operated some part of one day or a total of eight hours and forty minutes. The five pumps were operated for a grand average of seven hours and seven minutes for each day of the month, and pumped an average of twelve thousand three hundred and twenty-eight cubic feet of sewage for each minute of the month.

Fresh water pumps No's. 5 and 6 were operated some part of one day or a total of nine hours and fifty minutes, an average of nineteen minutes for each day of the month, and pumped an average of eight hundred and thirty-six cubic feet of water for each minute of the month.

On the third day of the month during a heavy rain screw pump No. 5 was operated eight hours and forty minutes pumping sewage.

Sewage pump No. 2 was shut down on the 1st on account of a burned thrust bearing and was put back in service on the 8th. Repairs were made to the thrust plates on sewage pump No. 3 on the 8th and 9th. Two 250 gallon oil storage tanks were installed between the 20th and 28th, and changes were made in the oil filtering system to make the loss of oil im-

possible. Miscellaneous repair work was carried on throughout the month. A heavy rain on the 3rd taxed the capacity of the station and one of the fresh water pumps was used to pump sewage.

Lawrence Avenue Pumping Station.

This station was operated pumping sewage and fresh water, throughout the month. The pumps were operated as follows:

Sewer pump No. 1 was operated some part of seven days or a total of eighty hours and fifty minutes. Pump No. 2 some part of seventeen days or a total of three hundred and twelve hours and fifty minutes. Pump No. 3 some part of twenty days or a total of four hundred hours and fifteen minutes. The three pumps were operated for a grand average of eight hours and thirty-two minutes for each day of the month and pumped an average of four thousand seven hundred and eighty-seven cubic feet of sewage for each minute of the month.

Fresh water pump No. 4 was operated some part of ten days or a total of one hundred and six hours and ten minutes, an average of three hours and twenty-five minutes for each day of the month, and pumped an average of three thousand eight hundred and ninety-nine cubic feet of water for each minute of the month.

The stoker of boiler No. 2 was overhauled between the 12th and the 20th. All storage coal was used up and on the 21st coal began to come in from the Sangamon County Mining Company.

Wilmette Pumping Station.

This station was operated, pumping fresh water, throughout the month. The pumps were operated as follows:

Pump No. 1 was operated some part of twenty-nine days or a total of six hundred and sixteen hours and forty-seven minutes. Pump No. 2 some part of sixteen days or a total of two hundred and seventy-eight hours and twenty-seven minutes. Pump No. 3 some part of fifteen days or a total of one hundred and ninety-nine hours and fifty-three minutes. Pump No. 4 some part of thirty days or a total of five hundred and twenty-three hours and twenty-six minutes. The four pumps were operated for a grand average of thirteen hours and three minutes for each day of the month, and pumped an average of one thousand eight hundred and sixty cubic feet of water for each minute of the month.

STRUCTURES AND EQUIPMENT FOR SANITARY AND SPECIAL INVESTIGATIONS.

Laboratory at 39th Street.

Chemical analyses were made weekly of samples collected from the Main Channel and the Illinois river at Morris, Ottawa, Peru and Chillicothe. Special analyses were made on the samples sent from Lockport. The laboratory force was engaged in working up records, on the Stockyards Testing Station.

Sewer and Rain Gages.

Rain gages were operated at the 39th street pumping station, Stock Yards testing station, Lockport, Kensington, and at 31st and Western ave. The records collected were worked up as time permitted.

Investigation of Water Pollution.

Daily samples were collected from Lake Michigan at 39th st. and from the Main Channel at Lockport. Weekly samples from Lockport, and the Illinois River at Morris, Ottawa, Peru and Chillicothe.

ENGINEERING.

Map Drafting Division.

The following work was carried on during the month. The Des-Plaines River Sewer Atlas was completed. Be-

gan plotting North Branch Topographic Survey. Laying out route for telephone line along Main Channel. Indexing and filing maps and plans. Compiling Calumet-Sag Channel Atlas and Chicago River Atlas. Preparing plat A. E. & C. R. R. easement for Desplaines River Sewer Computing Co-ordinates for North Branch Survey. Reducing notes North Branch Survey. Obtaining data at the C. & N. W. Ry. office, for the Desplaines River Sewer Atlas. Copying data at the County Building for Calumet Sewer Atlas. Taking inventory of Cooley maps. Tracing plan of vault fixtures. Coloring Right of Way maps for Storage Basin. Printing Index cards.

Sanitary Division.

The preparation of a report on the testing station work at the Stock Yards was continued. The preparation of plans and specifications for the Calumet sewer was continued. Conferences were held with officials of the City of Chicago. Preparation of plans of the Desplaines River treatment works was continued and conferences held with the village officials. The preparation of supplementary plans for the Calumet and Evanston pumping stations was continued. Correspondence was carried on with Consulting Engineer A. B. Wood on all pumping stations. Studies were made of the proposed re-arrangement of the 95th street pumping station. Preparation of plans and specifications of the Des-Plaines River Sewage Treatment Plant was continued. The preparation of plans for the storm overflow to the Calumet River at Wildwood was continued. Studies were continued on an auxiliary generator station at the Calumet Sewage Treatment Plant, to be run by oil engines. Conferences were held with various parties from the Calumet Region in Indiana over proposed schemes for sewage diversion and treatment. A meeting was held with the Mayors and other public officials of the towns in this region and the City Engineers of Hammond, East Chicago, Whiting and Gary were requested by their respective Mayors or Citizens to prepare basic data and to form a Committee with the Chief Engineer and Sanitary Engineer of the Sanitary District to make a report. A visit was made to the Milwaukee Testing Station by the Chemist and Sanitary Engineer.

Rridge Division.

Work was continued on the detail drawings for the reinforced concrete work of the Calument Sewage Pumping Station.

The detail drawings of the steel work for the Desplaines Sewage Pumping Station were checked. A new layout was made for track diversion and temporary trestles at the G. T. W. Ry. bridge and B. & O. C. T. bridge. A plan was begun for a new concrete outfall at Dempster street (N. S. C.) also for a concrete culvert across Dempster street west of the North Shore Channel. A preliminary draft was made for an agreement with the City of Chicago for the construction of a single leaf bascule bridge across the Chicago River.

Hydraulic Measurement Division.

The self-recording gauges at the Main Channel at Willow Springs and Lemont and on the Lake Front at the U. S. Coast Guard Station were operated and periodically inspected. The records from the gauges were worked up in the office.

Field Parties.

Party was engaged on Chicago River dredging and docking. Setting concrete monuments on Section "O" Main Channel. Locating and estimating fill at sewer outlet at Argo. Tak-

ing soundings at Lemont under stone loading platform. Inspecting I. & M. Canal for obstructions Survey for outfalls on the North Shore Channel. Repairs to Desplaines River Levee at Summit. High water on the Des-Plaines River. Survey of the North Branch. Taking photographs of Section 1 Calumet-Sag Channel.

The Calumet-Sag Field parties performed the usual routine construction duties as follows: The Sag Division on Section 1; the Blue Island Division on Sections 13 and 14.

The general engineering force and other employees continued superintending engineering, construction and maintenance work, checking estimates, compiling unit, construction costs of the Desplaines River, Evanston and Calumet sewers and of the Calumet-Sag Channel sections.

Desplaines River Sewage Treatment plant. Evanston and Calumet Pumping stations.

Keeping the accounts of the department, preparing vouchers, furnishing information for other departments, and performing other necessary duties, etc.

Respectfully submitted,

G. M. WISNER,
Chief Engineer.

The Clerk presented report of the Attorney relative to the deposit of $12,000 of Liberty Bonds by the James A. Sackley Company, which was ordered published and filed, as follows:

Tuesday, September 9, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — I transmit herewith agreement between the James A. Sackley Company and The Sanitary District of Chicago with reference to the deposit by said Company with the Sanitary District of Liberty Bonds to the face value of $12,000.00 as security in addition to the bond of said Company for the faithful performance of its contract with the District, which contract and bond were approved by the Board of Trustees on September 4th, 1919. The agreement herewith transmitted was authorized by the Board of Trustees on September 4th, 1919, and was executed in duplicate and the duplicate copy delivered to the Sackley Company. pany.

The $12,000.00 in Liberty Bonds were delivered by the Sackley Company to the undersigned, who has delivered the same to the Treasurer of the Sanitary District, and I also transmit herewith the receipt of the Treasurer for said bonds.

I recommend that said agreement and receipt be published in the Proceedings and filed with the Clerk of the Sanitary District.

Respectfully submitted,

C. ARCH WILLIAMS,
Attorney.

CHICAGO, September 9, 1919.

Receipt for Liberty Bonds in Connection with the Contract Between The Sanitary District of Chicago and The James A. Sackley Company.

Received from C. Arch Williams, Attorney for The Sanitary District of Chicago, twelve Second Liberty Loan Converted 4¼ per cent Bonds, aggregating $12,000.00 face value, each for the sum of $1,000.00 with one coupon attached to each of said bonds, said conpons maturing May 15th, 1920, each for interest amounting to $21.25, which bonds are numbered as follows:

898255, 898256, 898257, 898258, 898259, 898260, 898261, 898262, 898263, 898264, 898265, and 898266,

said bonds being deposited with the Sanitary District under an agreement dated September 4, 1919, between the Jas. A. Sackley Company and The San-

itary District of Chicago, authorized by the Board of Trustees of the Sanitary District at its meeting on September 4, 1919, as additional security to the bond of Jas. A. Sackley Company approved by the Board of Trustees of the Sanitary District September 4, 1919, to secure the faithful performance of the contract between the said Jas. A. Sackley Company and the Sanitary District approved by the Board of Trustees on September 4, 1919.

G. M. Reynolds,
Treasurer.

By J. R. Washburn,
Ass't. Treasurer.

The Clerk presented report of the Attorney transmitting copy of order of the Public Utilities Commission of Illinois approving agreement between the Aurora, Elgin & Chicago Railroad Company and the Sanitary District dated February 8th, 1919, relative to the construction, maintenance and use of a four foot intercepting sewer in First Avenue, Maywood, Cook County, Illinois, which was ordered published and filed, as follows:

Chicago, September 8, 1919.

To the Honorable, The President and Members of the Board of Trustees of The Sanitary District of Chicago.

Gentlemen—I transmit herewith copy of the order of the Public Utilities Commission of Illinois approving the agreement between the Aurora, Elgin & Chicago Railroad Company and the Sanitary District of Chicago, dated February 8th, 1919, "Relative to the construction, maintenance and use of a four foot intercepting sewer in First Avenue, Maywood, Cook County, Illinois."

This order was received by me in a letter from the Public Utilities Commission under date of September 5th, and I respectfully request that the same be filed with the Clerk by order of the Board.

Respectfully submitted,
C. Arch Williams,
Attorney.

REPORTS OF COMMITTEES.

Engineering.

Trustee Clark presented the following report from the Committee on Engineering:

Chicago, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to install at the Terminal Station of the Sanitary District at 31st street and Western avenue, a platform scale of sufficient capacity to weigh material delivered by auto trucks or wagons; that Fairbanks, Morse & Co. have offered to furnish a 20 ton auto truck scale for the sum of $645.00 and the auxiliary steel work therefor for the sum of $291.20. Said scale and auxiliary steel is to be installed by the regular employes of the Sanitary District. He requests that he may be authorized to accept the offer of said Comapany as to the purchasing of said scale and to either accept the offer of said Company as to purchasing said auxiliary steel or to purchase the same in the open market for a price not in excess of $291.20.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept said offer of Fairbanks, Morse & Co. to furnish said scale for the sum of $645.00 and either to accept said offer of said Company to furnish said auxiliary steel for the sum

of $291.20 or to purchase said auxiliary steel in the open market for the lowest price obtainable, provided the cost of the same shall not exceed the sum of $291.20.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Sergel, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, Sept. 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to obtain a supply of coal for the operation of the H. N. May substation during the coming peak load period in order to care for the street lighting system of the City of Chicago.

Your Committee further reports that it has had difficulty in obtaining a supply of coal for the Thirty-ninth Street Pumping Station and the Lawrence Avenue Pumping Station which will meet the guarantee specified in the contracts for furnishing said coal, and is of the opinion that it is not advisable under the circumstances to advertise for bids for furnishing coal which will meet the specified guarantees for the H. N. May Station.

Your Committee further reports that the Electrical Engineer has taken up with the Edwards & Bradford Lumber Company the question of its ability to furnish coal to said station which will meet said guarantees on the terms and for the prices specified in its bid for furnishing coal to the Lawrence Avenue Pumping Station. Said Company has offered to furnish such coal if said contract is modified in the following particulars, towit: That the price quoted in said bid be made "subject to increases or decreases by change of miners' scale or freight rates," and that Section 9 of said specifications relating to accidents, car shortage, etc., be changed so that "deliveries would be subject to failure of the railroads to supply sufficient or suitable equipment, to strikes, labor agitation and disturbances, mine accidents and other causes beyond our control" and the Electrical Engineer recommends that said offer be accepted and approximately 1,000 tons of coal screenings be ordered from said Company on the terms and for the prices specified in its said bid for supplying coal to the Lawrence Avenue Pumping Station.

Your Committee is of the opinion that said offer of said Company should be accepted and the contract awarded to said Company to furnish coal on the basis of said specifications as amended in the particulars specified, and recommends the passage of the following order:

Ordered, That a contract, amended as above specified, for furnishing approximately 1,000 tons of coal screenings to the H. N. May Substation be and the same is hereby awarded to the Edwards & Bradford Lumber Company on the terms and for the prices specified in its bid for furnishing coal screenings to the Lawrence Avenue Pumping Station, and it is further

Ordered, That the Chairman of the Committee on Finance and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract as amended in accordance with the specifications of the Sanitary District when the same shall have been executed by said Edwards & Bradford Lumber Company and a bond for the faithful performance of said work shall have been furnished, and approved by the Committee on Finance.

Respectfully submitted,
WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Clark, Healy, Lawley, Littler, Mueller and Paullin—Six.

Nays—Messrs. Sergel and Nance—Two.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting of May 1, 1919 (page 365-A of the Proceedings), bids for furnishing coal screenings for the Thirty-ninth Street Pumping Station reports that on July 17, 1919 (page 903 of the Proceedings), the Board rejected the bid of the Sangamon County Coal Company for the reason that analyses of samples selected from coal furnished by said Company showed that none of the coal furnished equalled the guarantee specified and also on August 7, 1919 (page 968 of the Proceedings), the Board rejected the bid of the Sterling Midland Coal Company for the same reason and authorized the Chief Engineer to purchase from the Bickett Coal & Coke Company a sufficient number of cars of coal to enable him to determine by analyses whether said coal equalled said guarantee.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the analyses of samples of coal furnished by the Bickett Coal & Coke Company show that said coal does not equal the guarantee specified and recommends that said bid be rejected and that a contract for furnishing said coal for said station be awarded to the Edwards & Bradford Lumber Company, the only remaining bidder.

Your Commmittee further reports that the Chief Engineer states that analyses of samples of the coal furnished by said Company show that said coal will comply with the specifications and he recommends that said contract be awarded to said firm for furnishing said coal.

Your Committee further reports that it is advised by the Attorney that an inspection of the bid of the last mentioned Company shows that it made said bid on the condition that the prices quoted were made "subject to increases or decreases by change of miner's scale or freight rates" and also refused to concur in Section 9 of the specifications relating to accidents,, car shortage, etc., and stipulated that "deliveries would be subject to failure of the railroads to supply sufficient or suitable equipment, to strikes, labor agitation and disturbances, to mine accidents and other causes beyond our control," and that said bid is therefore informal.

Your Committee further reports that it is advised by said Company that it is ready and willing to enter into a contract to furnish said coal for said sta-

tion in accordance with the specifications if the same are amended in the particulars above noted.

Your Committee is of the opinion that inasmuch as said Edwards & Bradford Lumber Company is the only bidder which can furnish coal equal to the specified guarantee that the specifications should be amended in the particulars specified and a contract awarded to said Company, otherwise the Sanitary District may face a shortage of coal during the winter months.

Your Committee therefore recommends the passage of the following order:

Ordered, That the bid of the Bickett Coal & Coke Company be, and the same is hereby rejected for the reason stated; and it is further

Ordered, That the specifications of the Sanitary District for furnishing coal screenings for the Thirty-ninth Street Pumping Station be and the same are hereby amended in the particulars above specified, and it is further

Ordered, That the contract as amended for furnishing coal screenings to the Thirty-ninth Street Pumping Station be and the same is hereby awarded to the Edwards & Bradford Lumber Comapny on the terms and for the prices specified in its bid, and it is further

Ordered, That the Chairman of the Committee on Finance and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract as amended in accordance with the specifications of the Sanitary District when the same shall have been executed by said Edwards & Bradford Lumber Company and the bond for the faithful performance of said work shall have been furnished and approved by the Committee on Finance, and it is further

Ordered, That the check of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Messrs. Sergel and Nance — Two.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting May 1, 1919 (page 365-A of the Proceedings), bid for furnishing coal screenings for the Lawrence Avenue Pumping Station reports that on July 17, 1919 (page 903 of the Proceedings), the Board rejected the bid for the Sangamon County Coal Company for the reason that analyses of samples selected from coal furnished by said Company showed that none of the coal furnished equalled the guarantee specified.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that the analyses of samples of coal furnished by the Sterling Midland Coal Company and by the Bickett Coal & Coke Company show that said coal does not equal the guarantee specified and rec-

ommends that said bids be rejected and that a contract for furnishing said coal for said station be awarded to the Edwards & Bradford Lumber Company, the only remaining bidder.

Your Committee further reports that the Chief Engineer states that analyses or samples of the coal furnished by said Company show that said coal will comply with the specifications and he recommends that said contract be awarded to said firm for furnishing said coal.

Your Committee further reports that it is advised by the Attorney that an inspection of the bid of the last mentioned Company shows that it made said bid on the condition that the prices quoted were made "subject to increases or decreases by change of miner's scale or freight rates" and also refused to concur in Section 9 of the specifications relating to accidents, car shortage, etc., and stipulated that "deliveries would be subject to failure of the railroads to supply sufficient or suitable equipment, to strikes, labor agitation and disturbances, to mine accidents and other causes beyond our control," and that said bid is therefore informal.

Your Committee further reports that it is advised by said Company that it is ready and willing to enter into a contract to furnish said coal for said station in accordance with the specifications if the same are amended in the particulars above noted.

Your Committee is of the opinion that inasmuch as said Edwards & Bradford Lumber Company is the only bidder which can furnish coal equal to the specified guarantee that the specifications should be amended in the particulars specified and a contract awarded to said Company, otherwise the Sanitary District may face a shortage of coal during the winter months.

Your Committee therefore recommends the passage of the following order:

Ordered, That the bids of the Sterling Midland Coal Company and the Bickett Coal & Coke Company be and the same are hereby rejected for the reason stated, and it is further

Ordered, That the specifications of the Sanitary District for furnishing coal screenings for the Lawrence Avenue Pumping Station be and the same are hereby amended in the particulars above specified, and it is further

Ordered, That the contract as amended for furnishing coal screenings to the Lawrence Avenue Pumping Station be and the same is hereby awarded to the Edwards & Bradford Lumber Company on the terms and for the prices specified in its bid, and it is further

Ordered, That the Chairman of the Committee on Finance and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract as amended in accordance with the specifications of the Sanitary District when the same shall have been executed by said Edwards & Bradford Lumber Company and a bond for the faithful performance of said work shall have been furnished and approved by the Committee on Finance, and it is further

Ordered, That the check of the respective bidders for said work be returned upon the execution and approval of said bond.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—seven.

Nays—Messrs. Sergel and Nance — Two.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, The President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that the Sanitary District for a number of years has been using certain transformers belonging to the City of Chicago at the Wabansia Avenue Substation; that the City has recently notified him that it will shortly need these transformers for its own purposes.

He further states that the City has abandoned the use of the Emerald Avenue Substation where the Sanitary District has transformer equipment, but that the load supplied from said station can be transferred to the Ashland Avenue Substation by increasing the equipment therein, and that the transformers which are now in use at the Emerald Avenue Substation can be used in place of the transformers belonging to the City at the Wabansia Avenue Substation, and he recommends that three 500 K. V. A. transformers be purchased for installation at said Ashland Avenue Substation to care for the load now supplied from said station and also the Emerald Avenue Substation, and requests that he may be authorized to prepare plans and specifications for the purchase of said transformers.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to prepare plans and specifications for the purchase of the transformers above specified and present the same when prepared to your Committee for approval.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that when a coffer dam placed in the penstock on No. 6 unit at the Power House at Lockport was nwatered it was discovered that the head gates were in bad condition and will have to be practically rebuilt: that this condition is largely due to the fact that said head gates were never equipped with hydraulic rams for operating same as are all the other headgates on the other units. He further states that it is extremely important that rams be installed in the gates in question in order to prevent any delay in getting Unit No. 6 back in service in time for the peak load, and he requests authority to purchase in the open market three hydraulic rams to operate said gates at an estimated cost of $500.00 each, the work of installing

said rams to be done by the regular employes of the Sanitary District.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to purchase in the open market for the lowest price obtainable three hydraulic rams to operate the head gates of Uni No. 6 at the Power House at Lockport, provided the cost of the same shall not exceed the sum of $500.00 each and to install said rams by the regular employes of the Sanitary District.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that in the year 1912, the Sanitary District constructed the Stony Creek Diversion Ditch in order to divert the waters of Stony Creek during the construction of contract Section 13 of the Calumet-Sag Channel, and constructed temporary bridges across said ditch at Robinson, Chicago and Canal Streets in the City of Blue Island.

He further states that said bridges are now in need of repairs and that their maintenance is not included in the contract for work on said section, and he estimates the cost of repairing said bridges at $450.00, $400.00 and $400.00 respectively.

He further states that said work can be performed at a less cost by A. Guthrie & Co., Inc., contractor for said Section 13, under the "extra work" clause of its contract than in any other manner, and he requests authority to order said contractor to do said work.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized to order A. Guthrie & Co., Inc., to perform the work of repairing said bridges, under the "extra work" clause of its said contract, provided that the cost thereof shall not exceed the respective sums above stated.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that the two three-quarter ton auto trucks used as trouble cars by the Electrical Department which were purchcased by the Sanitary District from the International Harvester Company over two years ago have given unusually good service but further use will necessitate frequent repairs and it is advisable to obtain two new trucks in their stead. He further states that the International Harvester Company has offered to furnish the chassis for two new three-quarter ton trucks, transfer the bodies and lighting equipments from the chassis of the old trucks and mount same on the new chassis, make all necessary repairs to said bodies and repair and letter same at a cost of $1,775.00 for each truck and will allow on said price the sum of $750.00 for each old chassis, making each new truck cost the net sum of $1,025.00 and he recommends that said offer be accepted.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept the offer of the International Harvester Company to furnish the Sanitary District with two new three-quarter ton auto trucks on the basis stated.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to purchase a motor generator set with which to operate the Butterfly dam near the Controlling Works at an estimated cost of $4,000.00, and he requests that he be permitted to prepare plans and specifications therefor.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to prepare plans and specifications for the motor generator set above specified and when the same are prepared to present the same to your Committee for its approval.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that the load on the generators at the Power House at Lockport fluctuates causing complaints from consumers and in order to remedy this condition it is necessary to install voltage regulators on said generators at an estimated cost of $5,000.00 and requests that he be permitted to prepare plans and specifications therefor.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to prepare plans and specifications for the voltage regulators above specified and when the same are prepared to present the same to your Committee for its approval.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering herewith submits a form of license agreement to be entered into between The Baltimore & Ohio, Chicago Terminal Railroad Company and the Sanitary District whereby said Railroad Company grants permission to the Sanitary District to install and maintain a four duct underground conduit line across the right of way and under the tracks of said Railroad Company in the west side of Western Avenue near 75th street, as indicated by red lines on a blue print attached to said agreement.

Your Committee having examined said agreement, which has been approved by the Attorney recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk be, and they are hereby authorized and directed to execute in duplicate the form of said agreement hereto attached.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer in which he states that it is necessary to purchase eighteen (18) 100 K. V. A. transformers to replace transformers in need of repairs and to care for additional electrical energy to be supplied power consumers at an estimated cost of $12,000.00, and he requests that he be permitted to prepare plans and specifications therefor.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to prepare plans and specifications for the transformers above specified and when the same are prepared to present the same to your Committee for its approval.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Assistant Chief Engineer in which he states that the peat near the Bach Road crossing the Calumet-Sag Channel is on fire and has been burning for the past ten days; that the fire is now in close proximity to the riprap slopes of the Calumet-Sag Channel, and if said fire should destroy the peaty soil which supports said riprap slopes the same would collapse. He further states that in order to put out said fire it is necessary to rent a scow with boiler, pump and hose on a per diem basis, said equipment to be operated by the employes of the Sanitary District at a total estimated cost of $1,000.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to rent said scow and equipment on a per diem basis for the purpose stated, provided the cost of the same shall not exceed the sum of $1,000.00 and to operate said scow and equipment with the employes of the Sanitary District.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the specifications for the construction of a heavy traffic highway upon the right-of-way of the North Shore Channel of the Sanitary District contain special provisions relative to the furnishing of cement by the Sanitary District to the Contractor.

Your Committee further reports that it examined and approved the specifications prepared by the Chief Engineer for the purchase of said cement and in order that work of constructing said highway might not be delayed for lack of cement, your Committee directed that the purchase of said cement be advertised so that bids could be received and opened at the meeting of the Board to be held September 25, 1919, or the next regular meeting thereafter.

Your Committee, therefore, recommends the passage of the following order:

Ordered, That the specifications prepared by the Chief Engineer for the purchase of the cement above specified be and the same are hereby approved, and it is further

Ordered, That the action of the Committee on Engineering, in directing that the purchase of said cement be advertised, be and the same is hereby ratified and confirmed.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Recess.

Mr. Clark moved that the Board take a recess for five minutes for the purpose of considering informal bids received for furnishing 2,000 tons of lump coal for the 39th Street Pumping Station.

The motion prevailed.

At the expiration of said period of time the Board reconvened and proceeded to the regular order of business.

Trustee Clark presented the following report from the Committee on Engineering:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting of September 4, 1919 (page 1118 of the Proceedings) bids for furnishing approximately 2,000 tons of Franklin County No. 2 inch lump coal for the Thirty-ninth street Pumping Station reports that it has considered the proposal of the East Coal Company the only one presented, together with the report submitted by the Chief Engineer and is of

the opinion that the price bid for said coal is excessive.

Your Committee further reports that it has considered informal bids obtained by the Chief Engineer from four coal companies to furnish said coal in accordance with the guarantee contained in the specifications therefor and has also considered a report made by the Chief Engineer with reference to said bids.

Your Committee finds that the Bickett Coal & Coke Company is the lowest responsible bidder and said Company guarantees that said coal will meet the requirements of said specifications.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the bid of the East Coal Company be and the same is hereby rejected for the reason stated and that the check of said bidder be returned to it, and it is further

Ordered, That the contract for furnishing approximately 2,000 tons of Franklin County No. 2 inch lump coal for the Thirty-ninth Street Pumping Station be and the same is hereby awarded to the Bickett Coal & Coke Company on the terms and for the price specified in its bid, said contract to be drafted so that it will comply with the guarantee specified in the specifications of the Sanitary District, and it is further

Ordered, That the Chairman of the Committee on Finance and the Clerk be and they are hereby authorized and directed to execute in duplicate said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Bickett Coal & Coke Company and a bond for the faithful performance of said work shall have been furnished, and approved by the Committee on Finance.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
JAS. H. LAWLEY,
MATT A. MUELLER,
PATRICK J. CARR,
Committee on Engineering.

Trustee Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—Mr. Nance.

Passed and Not Voting—President Sergel.

Finance.

Trustee Lawley presented the following report from the Committee on Finance:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that Mrs. Peter Homerding has presented a claim against the Sanitary District to recover damages for personal injuries to herself and damages to a buggy in which she was driving caused by her horse stepping into a hole in the flooring of the Stevens street bridge across the Main Channel of the Sanitary District at Lemont, Illinois.

Your Committee further reports that said claimant has offered to settle said claim for the sum of $25.00, which, in the opinion of your Committee is a reasonable settlement.

Your Committee having fully considered the matter recommends the passage of the following order:

Ordered, That the Chairman of the

Committee of Finance of the Board of Trustees of the Sanitary District, and the Clerk, be, and they are hereby authorized and directed to issue a warrant in the sum of $25.00, payable to Mrs. Peter Homerding on a voucher to be approved by the Attorney in full settlement of the above claim and deliver said warrant to said claimant upon the execution by her and her husband of a release of all claims or demands for damages arising out of the said accident.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
Committee on Finance.

Trustee Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Trustee Lawley presented the following report from the Committee on Finance:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to report that bonds of The Sanitary District of Chicago, to the amount of two hundred six thousand ($206,000.00) dollars will mature October 1, 1919.

Your Committee further reports that the semi-annual interest on the eleventh, seventeenth and twenty-sixth issues of bonds of The Sanitary District of Chicago, amounting to the sum of twenty-one thousand five hundred sixty dollars ($21,560.00), will fall due October 1, 1919. Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees and the Clerk be, and they are hereby, authorized to draw a warrant payable to the order of the Treasurer of The Sanitary District of Chicago, for the sum of two hundred twenty-seven thousand five hundred sixty dollars ($227,560.00), to pay the principal and semi-annual interest due October 1, 1919, on bonds of The Sanitary District of Chicago, as follows:

The principal of 125 bonds of the eleventh issue		$125,000.00
The principal of 56 bonds of the seventeenth issue		28,000.00
The principal of 53 bonds of the twenty-sixth issue		53,000.00
Total bonds		$206,000.00
Six months' interest on $250,000.00 of the eleventh issue, at 4%	$ 5,000.00	
Six months' interest on $192,000.00 of the seventeenth issue at 4%	3,840.00	
Six months' interest on $636,000.00 of the twenty-sixth issue at 4%	12,720.00	
Total interest		$ 21,560.00
Total principal and interest		$227,560.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
Committee on Finance.

Trustee Lawley moved that the report be adopted and the accompanying order passed:

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Trustee Lawley presented the following report from the Committee on Finance:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance herewith submits to the Board a grant of easement whereby The Forest Preserve District of Cook County, grants to The Sanitary District a perpetual easement to construct, reconstruct, repair, maintain and operate an intercepting sewer and appurtenance thereto in the Des Plaines River District in, under and through certain real estate therein described. Said easement is in the usual form in use by the District in such cases.

Your Committee further reports that it has examined said grant of easement, which has been approved by the Chief Engineer and Attorney and therefore recommends the passage of the following order:

Ordered That the Chairman of the Committee on Finance of the Board of Trustees, of The Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the said form of easement hereto attached. The same having been duly executed by the proper officials of The Forest Preserve District of Cook County.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
Committee on Finance.

Trustee Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Trustee Lawley presented the following report from the Committee on Finance:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that in accordance with the terms of a contract dated June 29, 1916 (page 903 of the Proceedings), between Byrne Bros. Dredging & Engineering Co. and the Sanitary District, for the excavation and collateral work on contract section six of the Calumet Intercepting sewer, the Sanitary District has retained from time to time, as a reserve percentage, 12½% of the amount due said contractor, which on September 15, 1919, equal the sum of $75,906.86, which sum under the terms of said contract cannot be paid said contractor until 30 days' after the completion of the work under said contract, and said Contractor has requested that he be paid $50,000.00 of said sum.

Your Committee further reports that said contractor also entered into a contract with the Sanitary District dated June 29, 1916 (page 864 of the Proceedings) for the construction of the Calumet Intercepting Sewer Contract section No. 5 and is behind in the progress of said work but the Chief Engineer reports that said Company has installed a good system and in all probability said contract will be completed during the coming year and it will aid said contractor very materially on the work on this section if said payment is made.

Your Committee further reports that it is of the opinion that said payment of $50,000 should only be made to said contractor on condition that the sureties on its bonds for the faithful performance of both of said contracts consent thereto in writing and your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to pay upon the voucher of the Chief Engineer to Byrne Bros. Dredging & Engineering Company the sum of $50,000.00 retained on said contract No. 6 for the excavation and collateral work on said Calumet Intercepting sewer, provided that the United States Fidelity & Guaranty Company, as surety on the bond of said contractor for the faithful performance of its contract for the construction of said contract section 6 and also as surety on the bond of said contractor for the faithful performance of its contract for the construction of contract section five of said intercepting sewer consents in writing that said payment may be made and that all the conditions and terms of both said contracts shall otherwise remain in full force and effect.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
WILLIS O. NANCE,
MATT A. MUELLER,
Committee on Finance.

Trustee Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Nance—Seven.

Nays—None.

Trustee Lawley presented the following report from the Committee on Finance:

CHICAGO, September 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Chief Engineer in which he states that the work covered by the contract of Jas. O. Heyworth with the Sanitary District for the excavation and construction of contract section one of the Calumet-Sag Channel dated September 24, 1914 (page 1629 of the Proceedings), and for making the connection between the Main Channel and the Calumet-Sag Channel authorized by the Board June 6, 1918 (page 401 of the Proceedings), has been completed in accordance with all the terms and conditions of the contract except as to the time of completion. It appears from said communication that there was default in time of 157 days in the completion of said work but the contractor claims he was delayed in completing said work for a total period of 213.4 days, due to war conditions, failure to obtain the site of the work at Archer Road and at two railroad crossings and for time lost in moving machinery for scabbling and the Chief Engineer has extended the time for the completion of said work for a period of time equal to said 157 days' delay.

The Chief Engineer further states that he has deducted the sum of $1,000.00 from the amount due said Contractor, which is to be withheld until the questions of additional compensation due to the increased cost of said work due to war conditions and the validity of a claim submitted by the Contractor for extra backfilling have been settled.

Your Committee is of the opinion that the sum of $44,424.90, found to be due said Contractor after deducting the sum of $1,000.00 should be paid and recom-

mends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to pay to Jas. O. Heyworth on the voucher of the Chief Engineer said sum of $44,424.90 upon the execution by him of a receipt in full of all claims and demands arising out of or resulting from the performance of the work under said contract except as to said sum of $1,000.00 withheld by the Sanitary District as above stated, and as to all unsettled claims for additional compensation due to war conditions and as to said claim for extra backfilling, and also upon the execution of an affidavit by him that all materialmen, mechanics and workmen employed by him under said contract have been paid in full, said payment, however, to be made subject to any unaccrued or unmatured obligation imposed by said contract.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Trustee Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, Sept. 18, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll First Half of September, 1919.

L. F. King, Clerk (general payroll)	$ 30,757.12

Construction Account.

L. F. King, Clerk (expenses of employees)	$ 126.28	
L. F. King, Clerk (expenses of employees)	107.24	
L. F. King, Clerk (expenses of employees)	102.03	
L. F. King, Clerk (expenses of employees)	101.82	
L. F. King, Clerk (expenses of employees)	82.53	
Builders Iron Foundry (labor and material Desplaines River Sewage Treatments Works)	4,213.12	
The Overland Constr. Co. (labor and material erecting C. R. I. & P. bridge, Calumet-Sag Channel)	510.00	
E. A. Hanrahan (cleaning outfall ditches, Calumet-Sag Channel)	418.00	
Baltimore & Ohio Chicago Terminal R. R. (labor and material B. & O. crossing)	19,773.50	
A. Guthrie & Co. (extra work on account of Grand Trunk Western Ry. bridge)	2,638.29	
A. Guthrie & Co. (extra work on account of B. & O. C. T. R. R., Calumet-Sag Channel)	2,128.56	
Amounts carried forward	$ 30,201.37	$ 30,757.12

Amounts brought forward	$ 30,201.37	$ 30,757.12
A. Guthrie & Co. (extra work on account of B. & O. C. T. R. R. Calumet-Sag Channel)	1,681.16	
A. Guthrie & Co. (extra work on account of B. & O. C. T. R. R. Calumet-Sag Channel)	1,521.60	
A. Guthrie & Co. (extra work, G. T. W. Ry. Diversion)	1,156.79	
A. Guthrie & Co. (extra work, G. T. W. Ry. Diversion)	818.92	
A. Guthrie & Co. (extra work, C. R. I. & P. Bridge)	68.13	
A. Guthrie & Co. (extra work, Robinson St. Highway Bridge, Sec. 13, Calumet-Sag Channel)	26.52	
T. J. Forschner Constr. Co. (extra work, Calumet Pumping Station)	713.90	
Jas. O. Heyworth (labor and material, extra work, Calumet-Sag Channel)	170.86	
W. J. Neuman Wrecking Co. (labor and material wrecking and removing Power House)	6,125.00	
Lawrence F. King, Clerk (recording document)	1.95	
Nash-Dowdle Co. (labor and material temporary pumping service, Evanston, Ill.)	775.00	
Modjeski & Angier (inspection charges)	136.74	
John E. Burns Lumber Co. (lumber)	130.45	
H. M. Hooker Glass & Paint Co. (oil and cans)	28.58	
Augusta Schwarz (rent)	22.00	
Peth & Goeler (repairs to level and tripod leg)	8.50	
United Asbestos & Packing Co. (rubber packing, etc.)	6.29	
Chicago Towel Co. (towel service)	5.25	
Chicago Towel Co. (towel service)	5.25	
Chas. E. Graves & Co. (repairs to gauge clock)	4.00	
Parkers Towel Supply Co. (towel service)	1.60	
Chicago Towel Co. (towel service)	1.25	
Peoples Gas Light & Coke Co. (gas service)	37	
		$ 43,611.48

Maintenance and Operation Account.

L. F. King, Clerk (special roll, Lawrence Ave.)	$ 123.20	
L. F. King, Clerk (special roll, 39th St. P. S.)	105.00	
L. F. King, Clerk (special roll covering pipes, 39th St. P. S.)	97.50	
L. F. King, Clerk (special roll, repairs to boilers at 39th St. Pumping Station)	47.60	
Diamond Power Specialty Co. (labor and material, Lawrence Avenue Pumping Station)	444.00	
H. W. Jones-Manville Co. (cement, Lawrence Avenue Pumping Station)	50.50	
Chicago Fire Brick Co. (fire clay, cement and lime, Lawrence Avenue Pumping Station)	13.96	
The Lunkenheimer Co. (pipe fittings, Lawrence Avenue Pumping Station)	11.40	
Hinckley & Schmitt (drinking water, Lawrence Avenue Pumping Station)	8.50	
Standard Oil Co. (kerosene, Lawrence Avenue Pumping Station)	6.75	
Kirby Motor Trucking Co. (motor truck service, Lawrence Avenue Pumping Station)	6.35	
Kirby Motor Trucking Co. (motor truck service, Lawrence Avenue Pumping Station)	6.26	
Parkers Towel Supply Co. (towel service, Lawrence Avenue Pumping Station)	5.00	
L. Gould & Co. (white paper, Lawrence Avenue Pumping Station)	3.75	
Amounts carried forward	$ 929.77	$ 74,368.60

Amounts brought forward	$ 929.77	$ 74,368.60
Chicago Chemical & Polish Co. (metal polish, Lawrence Avenue Pumping Station)	3.67	
H. M. Hooker Glass & Paint Co. (turpentine, Lawrence Avenue Pumping Station)	2.53	
Sheridan Sheet Metal Works (sheet tin, etc., Lawrence Avenue Pumping Station)	2.50	
Kellogg Mackay Co. (machine bolts, Lawrence Avenue Pumping Station)	1.85	
Crane Company (gate valves, 39th Street Pumping Station)	179.44	
Weil Bros. (flanged valves, 39th Street Pumping Station)	160.00	
Henry M. Joda (repairs, 39th Street Pumping Station)	104.00	
Holman Soap Co. (soap powder, 39th Street Pumping Station)	45.62	
Weil Bros. (gate valves, 39th Street Pumping Station)	44.40	
Hinckley & Schmitt (drinking water, 39th Street Pumping Station	25.50	
Evening American Publishing Co. (advertisement, 39th Street Pumping Station)	16.65	
Kellogg Mackay Company (flanges faced only, 39th Street Pumping Station)	16.20	
United Asbestos & Packing Co. (sheet packing, 39th Street Pumping Station)	12.70	
Stewart Ice Company (ice, 39th Street Pumping Station)	12.00	
Hinckley & Schmitt (drinking water, 39th Street Pumping Station)	8.50	
Stebbins Hardware Company (cotton cord, 39th Street Pumping Station)	6.30	
Jos. T. Ryerson & Son (steel, 39th Street Pumping Station)	5.61	
The Lunkenheimer Company (steel grease cups, 39th Street Pumping Station)	.80	
L. F. King, Clerk (special roll, Lawrence Ave. Pumping Station)	175.00	
L. F. King, Clerk (special roll, repairs to boilers, 39th Street Pumping Station)	157.60	
Commonwealth Edison Company (fuses, 39th Street Pumping Station)	15.00	
Sangamon County Mining Company (coal, Lawrence Avenue Pumping Station)	1,950.56	
Sangamon County Mining Company (coal, Lawrence Avenue Pumping Station)	1,236.32	
Sangamon County Mining Company (coal, Lawrence Avenue Pumping Station)	597.60	
Joseph Sandeen (teaming)	175.12	
Sterling Midland Coal Co. (coal to 39th Street Pumping Station)	2,979.79	
Sterling Midland Coal Co. (coal to Lawrence Avenue Pumping Station)	262.61	
Consolidated Company (cement)	349.70	
L. F. King, Clerk (gas service)	.77	
McGrath Sand & Gravel Co. (gravel and sand)	482.01	
Consolidated Company (cement)	300.30	
Norris-Ward Coal Co. (car of coal)	269.36	
Consumers Company (sand and gravel)	174.89	
Mike Riess (hauling and storing pipe)	167.23	
Bentley Murray Company (small and large blank sheets, etc.)	162.00	
H. M. Hooker Glass & Paint Co. (oil turpentine, etc.)	97.95	
Anton Osadowski (hauling)	74.00	
Wm. O'Connell (supplies, hardware)	64.18	
Amounts carried forward	$ 11,270.03	$ 74,368.60

Amounts brought forward	$ 11,270.03	$ 74,368.60
A. Daigger & Co. (bottles and corks)	62.00	
Otley Paint Mfg. Company (paint)	56.75	
F. J. Koch (postal cards, form 88)	50.75	
Wm. Blasing (teaming)	48.10	
Wm. O'Connell (hardware supplies)	46.50	
The Wm. H. Reid Co. (oil)	40.18	
Mears Slayton Lumber Co. (lumber)	28.08	
G. Johnson (teaming)	26.19	
Barrett Hardware Co. (nails and bolt cutter)	21.60	
Peoples Gas Light & Coke Co. (gas service)	19.67	
Arthur F. Kolzow (taxi service for paymaster)	18.00	
Jas. Carmichael (material and labor)	14.80	
Geo. B. Carpenter & Co. (iron hopper)	11.51	
The Texas Company (gasoline)	10.97	
Stebbins Hardware Company (bush hooks, etc.)	7.99	
Old Glory Mfg. Co. (U. S. flag)	6.12	
Barrett Hardware Company (screen door)	6.00	
Burr-Vack Company (tray and time book)	4.05	
Burr-Vack Company (cover and sheets)	3.59	
Public Service Company of Northern Illinois (electrical energy)	1.50	
Parkers Towel Supply Company (towel service)	1.00	
		11,755.38
Clerical Department.		
L. F. King, Clerk (expenses of employee)	$ 12.00	
L. F. King, Clerk (expenses of employee)	2.98	
A. Hannibal (repairing chair)	6.50	
The Berkshire Company (paper)	8.40	
Burr-Back Company (pen and clips)	5.51	
Burr-Vack Company (chair pads)	7.20	
Burr-Vack Company (indelible pencils, etc.)	15.15	
The Fred J. Ringley Company (printing)	3.50	
The Fred J. Ringley Company (printing)	37.50	
		98.74
Law Department.		
L. F. King, Clerk (expenses of employee)	$ 19.73	
Martin Delaney (services rendered and expenses incurred)	187.00	
		206.73
General Account.		
Standard Oil Company (rent of main office, etc.)	$ 2,646.04	
Francis C. Shenehon (professional service rendered)	1,645.19	
J. L. Jacobs & Co. (services and expenses in connection with classification and standardization of positions and employment, etc.)	898.10	
Edmund D. Adcock (professional service in connection with U. S. vs. District, lake level controversy)	850.00	
Fred Klein Company (printing proceedings)	182.75	
Parkers Towel Supply Company (towel service)	26.00	
Alexander H. Revell & Co. (1 plate glass top)	25.40	
The Fred J. Ringley Company (printing)	13.00	
Fred Klein Company (printing proceedings)	12.00	
The Fred J. Ringley Company (printing)	6.50	
20th Century Press Clipping Bureau (clippings)	4.00	
		6,308.98
I. and M. Canal and Illinois River Conditions Department.		
E. H. Heilbron (expenses of employees)	$ 341.98	
Amounts carried forward	$ 341.98	$ 92,738.43

Amounts brought forward	$ 341.98	$ 92,738.43
T. H. Plank (meals for field party)	17.80	
L. D. Wells Motor Company (two Ford touring cars with starts, etc.)	1,676.80	
Taylor House (board and lodging, field party)	67.95	
Standard Oil Company (gasoline)	43.80	
National Steel & Copper Plate Company (photographic plates)	25.28	
Taylor House (board and lodging, field party)	74.40	
Crawford's Inn (board and lodging, field party)	108.00	
Crawford's Inn (livery service)	16.00	
J. H. White & Sons (livery service)	16.00	
Crown Garage (repairing inner tubes and casing)	10.10	
G. Cramer Dry Plate Company (plates)	9.53	
Park Hotel (board and lodging of field party)	8.30	
J. H. White & Sons (livery service)	5.20	
American Blue Print Paper Company (blue prints)	4.93	
		2,426.07
Police Department.		
L. F. King, Clerk (expenses of employees)	$ 38.04	
L. F. King, Clerk (expenses of employees)	24.66	
		62.70
Real Estate Department.		
L. F. King, Clerk (expenses of employee)	$ 114.40	
L. F. King, Clerk (expenses of employee)	47.56	
L. F. King, Clerk (premium on Bond-Keeley, real estate agent)	58.60	
L. F. King, Clerk (expenses of employee)	27.83	
		248.39
Electrical Department.		
L. F. King, Clerk (semi-monthly payroll)	$ 18,507.71	
F. E. Newbery Electrical Company (underground conduit)	17,673.85	
L. F. King, Clerk (expenses of employees)	596.71	
L. F. King, Clerk (expenses of employee)	7.87	
L. F. King, Clerk (water taxes)	4.23	
Aurilla Scully (compensation for death of husband)	50.00	
Wilbur J. Connell (beaver pipe threader)	263.34	
Western Electric Company (wattmeters, etc.)	261.89	
Commonwealth Edison Company (unilets, etc.)	176.76	
Commonwealth Edison Company (wattmeters)	90.26	
Commonwealth Edison Company (wire guards)	14.11	
L. F. King, Clerk (expenses of employee)	3.92	
Monarch Electric & Wire Company (binding posts, etc.)	82.12	
New York Belting & Packing Company (leather belt)	264.12	
Baldrey & Buildhauser (diving, etc.)	111.00	
Conroy Boiler & Tank Works (galvanized castings)	98.07	
Rex Rubber Tire Company (grey tubes)	79.80	
Wilbur J. Connell (oil cans, etc.)	58.41	
L. L. Fleig & Co. (red fibre tubes)	13.59	
L. F. King, Clerk (postage stamps)	66.15	
General Electric Company (lead covered cable)	11,986.85	
General Electric Company (transformers for stock)	480.00	
Standard Underground Cable Company (wire)	476.75	
Rhodes Metallic Packing Company (sets packing)	347.51	
Chicago Telephone Company (telephone service)	334.07	
The Ohio Brass Company (insulators)	283.36	
The Ohio Brass Company (insulators)	280.75	
Standard Underground Cable Company (wire)	249.26	
Delta Star Electric Company (repairing arresters)	180.00	
New York Belting & Packing Company (fire hose and couplings)	181.17	
Amounts carried forward	$ 53,223.63	$ 95,475.59

Amounts brought forward		$ 53,223.63	$ 95,475.59
Westinghouse Electric & Mfg. Company (transformers)		130.55	
Delta Star Electric Company (disconnecting switches)		120.58	
Pittsburgh Transformers Company (freight charges on transformers		83.43	
Western Electric Company (wire)		82.00	
Bentley Murray & Co. (books)		70.00	
Monarch Electric & Wire Company (fuse plugs, etc.)		61.50	
Belden Mfg. Company (wire)		41.41	
G. Johnson (teaming)		26.19	
Alenite Lubricator Company of Illinois (equipment Willys-Knight)		16.50	
American Supply Company (sanitary wipers)		16.42	
United Asbestos & Packing Company (vellumoid)		10.89	
Parkers Towel Supply Company (towel service)		9.00	
Rand McNally & Co. (map of Chicago, etc.)		8.20	
			53,900.30

Miscellaneous Accounts.

L. F. King, Clerk (roll repairs to walls, etc., first half of August, North Shore Channel)—			
Construction Account	$ 970.15		
Maintenance and Operation	5,477.36		
		$ 6,447.51	
L. F. King, Clerk (roll for repairs to walls, etc., first half of September, North Shore Channel)—			
Construction Account	$1,161.95		
Maintenance and Operation Account	5,876.87		
Electrical Department	170.00		
		7,208.82	
L. F. King, Clerk (expense of employees)—			
Construction Account	$ 55.89		
Maintenance and Operation	164.96		
Law Department	4.14		
		224.99	
L. F. King, Clerk (expenses of employees)—			
Construction Account	$ 35.04		
Maintenance and Operation	33.14		
Law Department	.50		
		68.68	
L. F. King, Clerk (special roll, 39th St.)—			
Maintenance and Operation Account	$ 105.00		
Electrical Department	105.00		
		210.00	
Chicago Telephone Co. (telephone service)—			
Maintenance and Operation Account	$ 15.30		
Law Department	13.70		
Clerical Department	.40		
Police Department	.65		
General Account	256.72		
Sundry Accounts Receivable	7.30		
Electrical Department	4.40		
		298.47	
The Frederick Post Co. (blue printing)—			
Construction Account	$ 88.44		
Maintenance and Operation Account	2.73		
Law Department	2.84		
		94.01	
			14,552.48
Grand Total			$163,928.37

Yours respectfully,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Employment.

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, Sept. 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Illinois Valley Department.

Edw. P. Napier, Rodman, $100.00 per month.

Joseph Merrion, Rodman, $100.00 per month.

W. L. Clark, Rodman, $100.00 per month.

John J. Burke, Rodman, $100.00 per month.

Walter Weitemeyer, Rodman, $100.00 per month.

Engineering Department.

Stanley Kasperak Oiler, $140.00 per month.

Frank A. Wittick, Inspector, $115.00 per month.

F. J. Otto, Inspector, $115.00 per month.

John Carroll, Rodman, $100.00 per month.

Harold J. Rawle, Steamfitter, $1.00 per hour.

John McCarthy, Rough Carpenter, 70 cents per hour.

E. Boe, Rough Carpenter, 60 cents per hour.

Michael Griffin, Rough Carpenter, 65 cents per hour.

Thomas Gallor, Laborer, 50 cents per hour.

Brony Gobek, Laborer, 50 cents per hour.

L. A. Passavento, Laborer, 50 cents per hour.

Philip Muldoon, Laborer, 50 cents per hour.

Michael Callahan, Laborer, 50 cents per hour.

John Shields, Laborer, 50 cents per hour.

Jack Regan, Laborer, 50 cents per hour.

John Ryan, Laborer, 50 cents per hour.

John Kepplen, Laborer, $4.50 per day.

S. Schmidl, Laborer, $4.50 per day.

Sam. Milazo, Laborer, $4.50 per day.

Louis Hoffman, Laborer, $4.50 per day.

INCREASES.

Engineering Department.

Saml. Vanderweil, Laborer, $96.00 per month to $105.00 per month.

Arthur LeBeau, Laborer, $96.00 per month to $105.00 per month.

Jos. Runnella, Laborer, $96.00 per month to $105.00 per month.

Michael Walsh, Laborer, $96.00 per month to $105.00 per month.

Michael Maloney, Laborer, $96.00 per month to $105.00 per month.

Joseph Genero, Laborer, $96.00 per month to $105.00 per month.

James Roach, Laborer, $96.00 per month to $105.00 per month.

James Marcharek, Laborer, $96.00 per month to $105.00 per month.

Jos. Ranctre, Laborer, $96.00 per month to $105.00 per month.

D. Clark, Laborer, $96.00 per month to $105.00 per month.

Saml. Stewart, Laborer, $96.00 per month to $105.00 per month.

Jas. O. Preston, Laborer, $96.00 per month to $105.00 per month.

Wm. Cantrell, Laborer, $96.00 per month to $105.00 per month.

Herbert Raetzke, Laborer, $96.00 per month to $105.00 per month.

Joseph Dunne, Laborer, $96.00 per month to $105.00 per month.

Chas. Weiland, Laborer, $96.00 per month to $105.00 pe rmonth.

Chas. Heintz, Laborer, $96.00 per month to $105.00 per month.

James H. Root, Laborer, $96.00 per month to $105.00 per month.

John Erickson, Laborer, $96.00 per month to $105.00 per month.

Salvator Goifre, Laborer, $96.00 per month to $105.00 per month.

Michael Freeman, Laborer, $96.00 per month to $105.00 per month.

C. Downs, Laborer, $96.00 per month to $105.00 per month.

T. J. Reaney, Laborer, $96.00 per month to $105.00 per month.

A. F. Ubrich, Laborer, $96.00 per month to $105.00 per month.

Geo. Sitts, Laborer, $96.00 per month to $105.00 per month.

Jos. McGuire, Laborer, $96.00 per month to $105.00 per month.

Leonard Ballinger, Laborer, $96.00 per month to $105.00 per month.

Alex. Kluczowski, Laborer, $96.00 per month to $105.00 per month.

Joseph Veugler, Craneman, $7.00 per day to $1.00 per hour.

B. Mulvaney, Laborer, $96.00 per month to $105.00 per month.

Fred Gabriel, Laborer, $96.00 per month to $105.00 per month.

TRANSFERS.

Clerk's Department.

Margaret Barclay, Stenographer, $125.00 per month to Stenographer and Proceedings Clerk at $200.00 per month.

Engineering Department.

Frank Belcastro, Laborer, $96.00 per month to Oiler at $140.00 per month.

Stanley Dubel, Laborer, $96.00 per month to Oiler at $150.00 per month.

Electrical Department.

Robert Klaiber, Stenographer, $125.00 per month to Time, Material and Order Clerk at $125.00 per month.

REINSTATEMENTS.

Due to honorable discharge from U. S. Army Service.

Clerk's Department.

George W. Miller, Vault Clerk, $150.00 per month.

Police Department.

Stanley Vojta, Patrolman, $125.00 per month.

Engineering Department.

Ralph S. Scott, Sub-instrument Man, $130.00 per month.

T. Elmer Dunne, Sub-instrument Man, $130.00 per month.

Joseph Haley, Steamfitter, $1.00 per hour.

Thos. P. Nugent, Laborer, $105.00 per month.

James Ryan, Laborer, $4.50 per day.

Electrical Department.

John F. Hayes, Stenographer, $125.00 per month.

Edw. G. Witt, Groundman, $115.00 per month.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
MATT A. MUELLER,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Healy, Lawley, Littler, Mueller and Paullin—Six.

Nays—None.

Passed and Not Voting—President Sergel.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, Sept. 18, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN — Your Committee on Electrical Development presents herewith contracts in duplicate with the Superior Stone Company, Lyons, Illinois, and with the Aermotor Company, 2500 W. Twelfth street; Olsen & Tilgner Manufacturing Company, 2278 Elston avenue; Frank W. Williams Company, 2215 Taylor street, and the Standardized Japanning Company, 2120 Southport avenue, Chicago, all corporations, wherein the Sanitary District agrees to furnish and said companies agree to take electric power for the peoriods of time and upon the terms and conditions set forth in said contracts which are in the usual form and have been approved by the Electrical Engineer. All are renewals except that of the Standardized Japanning Company.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and Clerk be and they are hereby authorized and directed to execute, in duplicate, the attached contracts which have been duly executed by said Companies.

Respectfully submitted,

H. E. LITTLER,
Chairman.
WALLACE G. CLARK,
MATT A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

ADJOURNMENT.

Mr. Mueller moved that the Board adjourn.

The motion prevailed.

L. E. Kunz

Clerk.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, OCTOBER 2, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel presiding, the roll being called, there were:

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Absent—None.

Bids.

The Clerk announced that three bids had been received for furnishing cement for the North Shore Channel Highway.

SUSPENSION REGULAR ORDER OF BUSINESS.

Mr. Clark moved to suspend the regular order of business and take up for consideration the proposals presented for cement under the order of "New Business."

The motion prevailed.

MINUTES.

Mr. Lawley moved that the minutes of the regular meeting of August 7, adjourned meeting of August 12; regular meeting of August 14; regular meeting of August 21 and regular meeting of September 4, 1919, all be approved

as printed without being read.

The motion prevailed.

REPORTS OF COMMITTEES.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing and delivering transmission oil to the Sanitary District under Divison "H" of the specifications, having considered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the William H. Reid Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing said oil and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering transmission oil to the Sanitary District under Division "H" of the specifications be, and the same is hereby awarded to the William H. Reid Company for the price named in its bid of 27.5 cents per gallon, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk be and they are hereby authorized and directed to execute in duplicate, the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by said William H. Reid Company and a bond for the faithful performance of said contract shall have been furnished by said Company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishnig and delivering said oil be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Clerk in which he says that on July 31, 1919, he issued his payroll check No. 804 on the Continental and Commercial National Bank in the sum of $104.16 payable to the order of George M. Reynolds, Treasurer of the Sanitary District, in payment of his salary for the last half of the month of July, 1919, which check was lost and payment thereof stopped at the bank and the Clerk requests authority to issue a duplicate check in lieu thereof.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to issue a new check in the sum of $104.16 payable to the order of George M. Reynolds and deliver the same to him in payment of his salary as above specified.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the Bickett Coal & Coke Company, in the penal sum of $4000.00 with the Southern Surety Company, as surety thereon, for furnishing and delivering 1,000 tons of Franklin County Illinois two (2) inch lump coal on board cars on the side track of the 39th street pumping station of The Sanitary District of Chicago, and, therefore, recommends the passage of the following order:

Ordered, That the bond of the Bickett Coal & Coke Company in the penal sum of $4,000.00 above specified for the faithful performance of its contract for furnishing and delivering the coal above specified, be, and the same is hereby approved; and it is further

Ordered, That said contract and bond be printed in the Proceedings.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Eight.

Nays—None.

The following is the contract and bond between the Bickett Coal & Coke Company and The Sanitary District of Chicago.

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR FURNISHING AND DELIVERINNG COAL AT THIRTY-NINTH STREET PUMPING STATION.

THIS AGREEMENT, Made and entered into this 18th day of September A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Bickett Coal and Coke Company, a corporation organized under the laws of the state of Illinois party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under penalty expressed in the bond, bearing even date herewith, hereto attached, at his proper cost and expense to furnish and deliver all coal called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter

stipulated, and said Sanitary District has covenanted, contracted and agreed and by these presents does covenant, contract and agree with said Contractor to order, accept, receive and pay for all coal so furnished and delivered, in the manner and under the conditions hereinafter stipulated.

It is further covenanted and agreed that the coal furnished and delivered shall be measured and tested under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and by the duly appointed agent of said Sanitary District, by whose measurements and calculations the quantities and quality of the coal furnished and delivered under this contract, and the rates of payment therefor, shall be determined, and said coal shall be accepted or condemned. The said Chief Engineer or other engineer designated by the Sanitary District shall have full power to reject or condemn any or all coal furnished and delivered under this contract which in his opinion does not conform to its spirit and to the terms and conditions herein expressed.

Wherever the words "Chief Engineer" or "Engineer" are used herein they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other Engineer designated by said Sanitary District.

SPECIFICATIONS

FOR FURNISHING AND DELIVERING COAL ON TRACK AT 39TH STREET PUMPING STATION.

General.

1. This contract includes the furnishing and delivering of coal as hereinafter specified on board cars on the side track of the 39th Street Pumping Station of The Sanitary District of Chicago, in Chicago, Illinois, between September 15, 1919 and December 1, 1919, inclusive.

Description of Coal Required.

2. Coal shall be of good quality of bituminous lump coal reasonably free from slate, dirt and other foreign matter coming from mines located along the right of way and tracks of the Illinois Central Railroad Company, or directly connected therewith by connecting spur tracks, which coal shall conform to these specifications.

Size.

3. Lump coal shall consist of coal known as two-inch lump. It shall consist of all coal retained on a screen with two (2) inch circular openings.

B. T. U.

4. Coal shall contain not less than twelve thousand three hundred (12,300) British thermal units per pound of dry coal.

Ash.

5. Coal shall contain not more than fifteen (15) percent of ash for dry coal.

Quantity.

6. The probable quantity of coal required is estimated at two thousand (2000) tons. The Contractor further agrees that any difference between the quantity of coal mentioned in the advertisement and the quantities of coal actually delivered hereunder shall not invalidate this contract or release the contractor from delivering all quantities of coal required by the pumping station as ordered by the Engineer, and the Contractor shall not be entitled to any extra payment for damages or loss of profits because of a difference between said quantity of coal mentioned in the advertisement for proposals and the quantities of coal actually ordered and delivered under this contract. The Contractor shall keep himself informed as to the rate of consumption from time to time and shall bear all demurrage charges caused by the delivery of coal more rapidly than the existing provisions for storage will allow of unloading and storing.

Purchase of Coal on the Open Market.

7. Should the Contractor fail to furnish and deliver coal of the quality equal, or superior, to the coal herein specified, then the said Sanitary District may declare this contract forfeited, either as to a portion of the same or the whole thereof and the Chief Engineer may purchase on the open market, at the lowest price then obtainable, such quantity, or quantities, of coal equal or superior to that herein specified as the Contractor shall fail to furnish and deliver or as may be needed from time to time by the requirements of said pumping station, notwithstanding such forfeiture. The Sanitary District shall not be obliged to have tested and analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station as above specified in excess

of the cost hereunder to said Sanitary District for an equal quantity of coal of a corresponding grade if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said contractor.

Should the Contractor fail to furnish and deliver coal in such quantities, or at such times, as the requirements of said pumping station may demand, or as ordered by the Chief Engineer of said Sanitary District, then said Chief Engineer may purchase in the open market, at the lowest price then obtainable, such quantity or quantities of coal equal or superior to that herein specified as the said Contractor shall fail to furnish and deliver or as may be needed by the requirements of said pumping station. The Sanitary District shall not be obliged to have tested or analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of the grade herein specified if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said Contractor.

Weights.

8. The Weights of the coal delivered shall be determined on scales under the supervision of the railroad over whose lines the coal is shipped, except in cases where the Chief Engineer of the Sanitary District elects to check the weights, in which case the weights shall be determined on the scales of the said Sanitary District at the pumping station. In cases where said Sanitary District weights are to govern, the Contractor, his duly accredited agent or some person in the office of said contractor, will be notified by telephone and if he so requests, will be given two (2) hours in which to reach the pumping station to check said weights. A ton is two thousand (2,000) pounds avoirdupois. All shipments shall be consigned to the Contractor at the point of delivery and receipted railroad freight bills showing the origin of the shipment, car numbers, routing, weights and date of shipment shall be promptly furnished by the contractor to the Sanitary District.

Mine Accidents, Car Shortage, etc.

9. If at any time during the period covered by this contract, there shall be a mine accident, railroad congestion, car shortage, or any other cause, which, in the opinion of the Contractor, shall make it desirable for him to deliver coal from sources other than the County and State named in this contract, it shall then be the duty of the Contractor to notify in writing the said Chief Engineer, who may, at his option, permit the Contractor to deliver, for such period as he may deem wise, the necessary quantity of coal from a source, satisfactory to the Engineer, other than herein specified, such coal to be equal in quality and subject to the same tests and analyses to that contracted for.

Samples.

10. The Sanitary District will appoint an agent to select a representative sample of coal from each car load delivered under this contract. Such agent will make the tests and analyses hereinafter specified from any single sample taken from any car load of coal or from the combination of samples taken from not to exceed six car loads of coal consecutively delivered to the Sanitary District. This work will be done by the Sanitary District at its sole cost and expense.

11. If the contractor so requests in writing, the Chief Engineer of said Sanitary District or said duly appointed agent will notify said Contractor, his duly appointed agent or some person in the office of said contractor by telephone at least two hours in advance of the time when any sample of coal is to be seleced, so that said Contractor may have a representative present at said time and in that event the sample or samples then selected shall each be divided into three equal portions which shall each be deposited in a suitable receptacle and made air tight. One of said portions of each sample shall be delivered to the contractor, the second portion of same to the agent of the Sanitary District and the third portion of same shall be sealed in the presence of the agents of both parties hereto and delivered to the agent of the Sanitary District and held by him for further use as hereinafter specified.

If the contractor, his duly appointed agent or person in his office after being notified as herein specified, refuses, fails or neglects to be present at the time any sample of said coal is selected, then

said agent of said Sanitary District may select a sample of said coal and subject the same or said combined sample including same, to the tests hereinafter specified.

If the said contractor, his agent or person in his office being notified as herein specified shall refuse, fail or neglect to be present on three consecutive occasions when the samples are selected, then such samples of coal may thereafter be taken and said sample or combined sample tested and analyzed by said agent of said Sanitary District without notifying said contractor until said contractor shall again request said Sanitary District to notify him, his duly appointed agent or someone in his office of the time when such samples are to be selected.

Tests and Analyses.

12. The Sanitary District agrees to have the samples selected at any one time, or a combined sample above provided for, tested and analyzed by said duly appointed agent by the method described in Bulletin 22 of the Bureau of Mines, Department of the Interior and a copy of each test and analysis shall be delivered by said agent to each of the parties hereto.

In this test and analysis the British Thermal Units delivered in each car load of coal shall be determined from each sample or combined sample as follows:

Multiply the number of British Thermal Units per pound of dry coal by the percentage of moisture (expressed in decimals).

Subtract the product so found from the number of British Thermal Units per pound of dry coal.

The result is the British Thermal Units per pound of coal as delivered for that sample which result shall be applied in determining the British Thermal Unit in the coal contained in the car or cars from which said sample or samples so combined have been taken.

The contractor and the Sanitary District shall be bound by the report of the test and analysis of any sample of coal taken at any time or a combined sample thereof when the contractor has not requested in writing that he desires his representative to be present when the samples are taken or after he has made such request and fails or refuses to have a representative present.

If the Contractor or his representative is present when any sample is selected he and said Sanitary District shall be bound by the report of the test and analysis of the second portion of any sample deposited in said suitable air tight receptacle and delivered to the agent of the Sanitary District as above specified unless he objects, giving his reason for such objection in writing to said report, within five (5) days from the receipt of the same.

If said Contractor does so object to said report then the third portion of said sample, which was sealed and delivered to the agent of the Sanitary District for further use, shall be delivered with seal unbroken to a chemist of high standing to be mutually agreed upon by the parties hereto and tested and analyzed by such chemist within ten (10) days from the receipt of such sample at the sole expense of said Contractor and the test and analysis so made shall be final and binding upon the parties hereto, and the price to be paid said Contractor for the car loads of coal represented by said samples shall be determined by said report, and in the event that such test and analysis is not reported to the Sanitary District within said period of ten (10) days, then the parties hereto agree that the report of the first analysis shall be final and binding upon the parties hereto. In case said parties do not mutually agree upon said chemist, then upon the application of either of the parties hereto the then Chief Justice of the Circuit Court of Cook County, Illinois, may appoint such chemist who shall test and analye said third sample of coal as herein specified, at the sole expense of said Contractor, including all court expenses The decision of said chemist shall be final and binding upon both parties hereto.

Determination of Price.

13. The price per ton to be paid for any coal delivered shall be determined by dividing the average number of British Thermal Units per ton of coal delivered by the number of British Units for one cent calculated from the Contractor's guaranteed analysis and subtracting from the result obtained one cent for each percent of ash for dry coal delivered. The resulting value will be the price per ton which will be paid for that particular coal except as hereinafter specified. The name of the coal to be supplied, the locality from which said coal is to be supplied and the said guaranteed analysis is as follows:

Guaranteed Analysis.

Name...Franklin County, 2" Lump Coal
Locality.....Franklin County, Illinois

Guaranteed Analysis.

Moisture % as delivered.....10%
Ash%, dry coal.....15%
B. T. U. per lb. dry coal.....12.300

Price.

Four and forty one-hundredths dollars ($4.40) per ton.

Rejection of Coal.

14. The Chief Engineer of said Sanitary District may, at its option, reject any coal which the analysis report shows does not comply with the requirements of Sections 3, 4 and 5, or may accept the same subject to the following reductions in the price per ton as computed in accordance with section 12:

For each one hundred (100) B. T. U. (or fraction thereof) greater than fifty (50) that B. T. U. content falls below twelve thousand three hundred (12,300), a reduction of four (4) cents per ton.

For each one (1) per cent that the ash content exceeds fifteen (15) percent, a reduction of eight (8) cents per ton.

Payments.

15. Payment for coal delivered and acceped during any month will be within the following month at the rate herein specified under "Determination of Price" (See Section 12 and 13), provided that the requirements regarding freight bills have been complied with.

Examination of Premises.

16. All bidders for furnishing and delivering of coal under this contract are required before submitting proposals, to carefully examine the premises at the pumping station and to make all necessary examinations and investigations to inform themselves thoroughly as to the facilities for delivering coal in the quantities and in the manner specified in this contract and in the specifications forming part of same, the existing storage capacity of the station, and to inform themselves thoroughly as to all of the difficulties that may be involved in the complete fulfillment of all of the terms and conditions of this contract and specifications. No plea of ignorance of conditions that exist or that may hereafter exist or of difficulties that may be encountered in the fulfillment of all of the terms and conditions of this contract and specifications, due to a failure on the part of the bidder to make the necessary examinations and investigations that would disclose same, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract and specifications, or will be accepted as a basis for any claims whatsoever for extra compensation.

Employers' Liability Act.

17. The Contractor further agrees to insure to his employes or their beneficiaries the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled, "An Act ot promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and for a penalty for its violation, and repealing an Act, entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employes in or about the performance of this contract.

Contractor's Bond.

18. The Contractor shall execute a bond in the sum of Four Thousand Dollars ($4,000.00) for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the said Sanitary District, conditioned upon the faithful performance of all of the terms and conditions of this contract and specifications, and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days' notice thereof to said Contractor in writing,

require said Contractor to furnish a new and additional bond in the sum of not to exceed Four Thousand Dollars ($4,000.00) with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

IN WITNESS WHEREOF, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested and its corporate seal to be hereunto affixed.

THE SANITARY DISTRICT OF CHICAGO.
By JAS. H. LAWLEY,
Chairman of Its Committee on Finance.
Attest:
L. F. KING,
Clerk.
BICKETT COAL & COKE CO. (Seal)
By F. R. KAYE,
Vice-President.
Attest:
W. H. SMITHBURNE,
Secretary.
SOUTHERN SURETY COMPANY. (Seal)
By O. W. HUMKE,
Attorney-in-Fact.
Approved October 1, 1919:
H. P. RAMEY,
Division Engineer.
G. M. WISNER,
Chief Engineer.
CHAS. E. ANTHONY,
Assistant Attorney.
C. ARCH WILLIAMS.
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, the Bickett Coal & Coke Company and Southern Surety Company, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Four Thousand Dollars ($4,000.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 18th day of September, A. D. 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas, the above bounden Bickett Coal & Coke Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 18th day of September, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for furnishing and delivering two thousand tons of Franklin County, Illinois, two-inch lump coal on board cars on the side track of the 39th Street Pumping Station of The Sanitary District of Chicago, as specified on the attached contract.

Now, If the said Bickett Coal & Coke Company shall in all respects well and truly keep and perform the said contract on its part, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, and attorneys' fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, which may in anywise result from the carelessness or neglect of said Bickett Coal & Coke Company, its agents, employes or workmen in any respect whatsoever, or which may result in account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suf-

fered in the course of employment,' approved June 10, 1911, in force May 1, 1912,' approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto which may accrue to each and every person who shall be employed by said Bickett Coal & Coke Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said Bickett Coal & Coke Company, or its agents, employes or workmen in the premises, and also that any judgment of any court or award of any Board of Arbitrators, or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto, relating to the compensation for accidental injuries or deaths suffered by employes in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Bickett Coal & Coke Company shall be conclusive against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Bickett Coal & Coke Co. (Seal)
By F. R. Kaye,
Vice-President.

Attest:
W. H. Smithburne,
Secretary.

Southern Surety Company. (Seal)
By O. W. Humke,
Attorney-in-Fact.

Approved as to form October 1, 1919:
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance reports that it has examined and approved the bond of the Edwards & Bradford Lumber Company with the Maryland Casualty Company thereon as surety, for the faithful performance of its contract for furnishing and delivering coal screenings into the bins of the Lawrence Avenue pumping station of the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the Edwards & Bradford Lumber Company for the faithful performance of the above specified contract, said bond being in the penal sum of $6,000.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,
Jas. H. Lawley,
Chairman.
Matt. A. Mueller,
George W. Paullin,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond between the Edwards & Bradford Lumber Company and the Sanitary District of Chicago.

The Sanitary District of Chicago.

Contract and specifications for furnishing and delivering coal at the Lawrence Avenue pumping station.

This Agreement, Made and entered into this 18th day of September, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and

by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Edwards & Bradford Lumber Company, a corporation organized under the laws of the State of Iowa, party of the second part, hereinafter designated the Contractor.

WITNESSETH, That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under penalty expressed in the bond, bearing even date herewith, hereto attached, at his proper cost and expense to furnish and deliver all coal called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter stipulated, and said Sanitary District has covenanted, contracted and agreed and by these presents does covenant, contract and agree with said Contractor to order, accept, receive and pay for all coal so furnished and delivered, in the manner and under the conditions hereinafter stipulated.

It is further covenanted and agreed that the coal furnished and delivered shall be measured and tested under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and by the duly appointed agent of said Sanitary District, by whose measurements and calculations the quantities and quality of the coal furnished and delivered under this contract, and the rates of payment therefor, shall be determined, and said coal shall be accepted or condemned. The said Chief Engineer or other engineer designated by the Sanitary District shall have full power to reject or condemn any or all coal furnished and delivered under this contract which in his opinion does not conform to its spirit and to the terms and conditions herein expressed.

Wherever the words "Chief Engineer" or "Engineer" are used herein they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other Engineer designated by said Sanitary District.

SPECIFICATIONS FOR FURNISHING AND DELIVERING COAL ON TRACK AT LAWRENCE AVE. PUMPING STATION.

General.

1. This contract includes the furnishing and delivering of coal as hereinafter specified into the bins of the Lawrence Avenue Pumping Station of The Sanitary District of Chicago, in Chicago, Illinois, from May 1, 1919, until May 1, 1920, inclusive.

Description of Coal Required.

2. Coal shall be of good quality of bituminous coal screenings reasonably free from slate, dirt and other foreign matter, and shall conform to the following specifications:

Size.

3. Screenings shall consist of all coal as mined passing between bars the minimum width between which is one and one-quarter (1¼) inches. Screenings shall contain not more than forty (40) per cent by weight of matter that will pass through a screen with one-quarter (¼) inch round holes.

B. T. U.

4. Screenings shall contain not less than twelve thousand three hundred (12,300) British thermal units per pound of dry coal.

Ash.

5. Screenings shall contain not more than fifteen (15) per cent of ash for dry coal.

Quantity.

6. The probable quantity of coal required is estimated at an average of four hundred tons per month, the consumption varying considerably from month to month during the year. The quantity is given only as an approximation and it is hereby distinctly understood and agreed that the Contractor shall furnish at the price determined as per Sections Twelve (12) and Thirteen (13) hereof, the quantity of coal required to operate the pumping station during the period of this contract as may be ordered by the Chief Engineer, be the same more or less than the quantity herein mentioned. The Contractor further agrees that any difference between the quantity of coal mentioned in the advertisement and the quantities of coal actually delivered hereunder shall not invalidate this contract or release the Contractor from delivering all quantities of coal required by the pumping station as ordered by the Engineer, and the Contractor shall not be entitled to any extra payment for damages or for loss of profits because of a difference

between said quantity of coal mentioned in the advertisement for proposals and the quantities of coal actually ordered and delivered under this contract. The Contractor shall keep himself informed as to the rate of consumption from time to time and shall bear all demurrage charges caused by the delivery of coal more rapidly than the existing provisions for storage will allow of unloading and storing.

Purchase of Coal on the Open Market.

7. Should the Contractor fail to furnish and deliver coal of the quality equal, or superior, to the coal herein specified, then the said Sanitary District may declare this contract forfeited, either as to a portion of the same or the whole thereof, and the Chief Engineer may purchase on the open market, at the lowest price then obtainable, such quantity, or quantities, of coal equal or superior to that herein specified as the Contractor shall fail to furnish and deliver or as may be needed from time to time by the requirements of said pumping station until May 1, 1920, notwithstanding such forfeiture. The Sanitary District shall not be obliged to have tested or analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station as above specified in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of a corresponding grade if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said Contractor.

Should the Contractor fail to furnish and deliver coal in such quantities, or at such times, as the requirements of said pumping station may demand, or as ordered by the Chief Engineer of said Sanitary District, then said Chief Engineer may purchase in the open market, at the lowest price then obtainable, such quantity or quantities of coal equal or superior to that herein specified as the said Contractor shall fail to furnish and deliver or as may be needed by the requirements of said pumping station until May 1, 1920. The Sanitary District shall not be obliged to have tested or analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of the grade herein specified if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said Contractor.

Weights.

8. The weights of the coal delivered shall be determined on scales under the supervision of the railroad over whose lines the coal is shipped, except in cases where the Chief Engineer of the Sanitary District elects to check the weights, in which case the weights shall be determined on the scales of the said Sanitary District at the pumping station. In cases where said Sanitary District weights are to govern, the Contractor, his duly accredited agent or some person in the office of said Contractor, will be notified by telephone and if he so requests, will be given two (2) hours in which to reach the pumping station to check said weights. A ton is two thousand (2,000) pounds avoirdupois. All shipments shall be consigned to the Contractor at the point of delivery and receipted railroad freight bills showing the origin of the shipment, car numbers, routing, weights and date of shipment shall be promptly furnished by the Contractor to the Sanitary District.

9. It is hereby understood and agreed that all deliveries under this contract will be made subject to a failure of the railroads to supply sufficient or suitable equipment, to strikes, labor agitations and disturbances, to mine accidents and other causes beyond the control of said Contractor.

Samples.

10. The Sanitary District will appoint an agent to select a representative sample of coal from each car load delivered under this contract. Such agent will make the tests and analyses hereinafter specified from any single sample taken from any car load of coal or from the combination of samples taken from not to exceed six car loads of coal consecutively delivered to the Sanitary District. This work will be done by the Sanitary District at its sole cost and expense.

11. If the Contractor so requests in writing, the Chief Engineer of said Sanitary District or said duly appointed agent will notify said Contractor, his duly appointed agent or some person in

the office of said Contractor by telephone at least two hours in advance of the time when any sample of coal is to be selected, so that said Contractor may have a representative present at said time and in that event the sample or samples then selected shall each be divided into three equal portions which shall each be deposited in a suitable receptacle and made air tight. One of said portions of each sample shall be delivered to the Contractor, the second portion of same to the agent of the Sanitary District and the third portion of same shall be sealed in the presence of the agents of both parties hereto and delivered to the agent of the Sanitary Disrict and held by him for further use as hereinafter specified.

If the Contractor, his duly appointed agent or person in his office after being notified as herein specified, refuses, fails or neglects to be present at the time any sample of said coal is selected, then said agent of said Sanitary District may select a sample of said coal and subject the same or said combined sample including same, to the tests hereinafter specified.

If the said Contractor, his agent or person in his office after being notified as herein specified shall refuse, fail or neglect to be present on three consecutive occasions when the samples are selected, then such samples of coal may thereafter be taken and said sample or combined sample tested and analyzed by said agent of said Sanitary District without notifying said Contractor until said Contractor shall again request said Sanitary District to notify him, his duly appointed agent or someone in his office of the time when such samples are to be selected.

Tests and Analyses.

12. The Sanitary District agrees to have the samples selected at any one time, or a combined sample above provided for, tested and analyzed by said duly appointed agent by the method described in Bulletin 22 of the Bureau of Mines, Department of the Interior, and a copy of each test and analysis shall be delivered by said agent to each of the parties hereto.

In this test and analysis the British Thermal Units delivered in each carload of coal shall be determined from each sample or combined sample as follows:

Multiply the number of British Thermal Units per pound of dry coal by the percentage of moisture (expressed in decimals).

Subtract the product so found from the number of British Thermal Units per pound of dry coal.

The result is the British Thermal Units per pound of coal as delivered for that sample which result shall be applied in determining the British Thermal Unit in the coal contained in the car or cars from which said sample or samples so combined have been taken.

The Contractor and the Sanitary District shall be bound by the report of the test and analysis of any sample of coal taken at any time or a combined sample thereof when the Contractor has not requested in writing that he desires his represenative to be present when the samples are taken or after he has made such request and fails or refuses to have a representative present.

If the Contractor or his representative is present when any sample is selected he and said Sanitary District shall be bound by the report of the test and analysis of the second portion of any sample deposited in said suitable air tight receptacle and delivered to the agent of the Sanitary District as above specified unless he objects, giving his reason for such objection in writing to said report, within five (5) days from the receipt of the same.

If said Contractor does so object to said report, then the third portion of said sample, which was sealed and delivered to the agent of the Sanitary District for further use, shall be delivered with seal unbroken to a chemist of high standing to be mutually agreed upon by the parties hereto and tested and analyzed by such chemist within ten (10) days from the receipt of such sample at the sole expense of said Contractor and the test and analysis so made shall be final and binding upon the parties hereto, and the price to be paid said Contractor for the car loads of coal represented by said samples shall be determined by said report, and in the event that such test and analysis is not reported to the Sanitary District within said period of ten (10) days then the parties hereto agree that the report of the first analysis shall be final and binding upon the parties hereto. In case said parties do not mutually agree upon said chemist, then upon the application of either of the parties hereto the then Chief Justice of the Circuit Court of Cook County, Illinois, may appoint such chemist who shall test and analyze said

third sample of coal as herein specified, at the sole expense of said Contractor, including all court expenses. The decision of said chemist shall be final and binding upon both parties hereto.

Determination of Price.

13. The price per ton to be paid for all the coal delivered during any month shall be determined by dividing the average number of British Thermal Units per ton of coal delivered during the month by the number of British Thermal Units for one cent calculated from the Contractor's guaranteed analysis and subtracting from the result obtained one cent for each per cent of ash for dry coal delivered. The resulting value will be the price per ton which will be paid for that particular coal except as hereinafter specified. The name of the coal to be supplied, the locality from which said coal is to be supplied and the said guaranteed analysis is as follows:

Guaranteed Analysis.

Name .....Economy
Locality....Williamson County, Illinois

Guaranteed Analysis.

Moisture, % as delivered..... 7%
Ash%, dry coal.....13%
B. T. U. per pound, dry coal.....12,300

Price.

Three and eighty one-hundredths dollars ($3.80) per ton.

Above price is subject to increase or decrease by change of miners' scale or freight rates.

Rejection of Coal.

14. The Chief Engineer of said Sanitary District may, at its option, reject any coal which the analysis report shows does not comply with the requirements of sections 3, 4 and 5, or may accept the same subject to the following reductions in the price per ton as computed in accordance with section 12:

For each one (1) per cent of coal in excess of forty (40) per cent passing through a screen with one-quarter (¼) inch holes, a reduction of four (4) cents per ton.

For each one hundred (100) B. T. U. (or fraction thereof) greater than fifty (50) that the B. T. U. content falls below twelve thousand three hundred (12,300), a reduction of six (6) cents per ton.

For each one (1) per cent that the ash content exceeds fifteen (15) per cent, a reduction of ten (10) cents per ton.

Payments.

15. Payment for coal delivered and accepted during any month will be within the following month at the rate herein specified under "Determination of Price" (See Sections 12 and 13), provided that the requirements regarding freight bills have been complied with.

Examination of Premises.

16. All bidders for furnishing and delivering of coal under this contract are required before submitting proposals, to carefully examine the premises at the pumping station and to make all necessary examinations and investigations to inform themselves thoroughly as to the facilities for delivering coal in the quantities and in the manner specified in this contract and in the specifications forming part of same, the existing storage capacity of the station, and to inform themselves thoroughly as to all of the difficulties that may be involved in the complete fulfillment of all of the terms and conditions of this contract and specifications. No plea of ignorance of conditions that exist or that may hereafter exist or of difficulties that may be encountered in the fulfillment of all of the terms and conditions of this contract and specifications, due to a failure on the part of the bidder to make the necessary examinations and investigations that would disclose same, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract and specifications, or will be accepted as a basis for any claims whatsoever for extra compensation.

Employers' Liability Act.

17. The Contractor further agrees to insure to his employes or their beneficiaries the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and for a penalty for its violation, and repealing an Act entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suf-

fered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in or about the performance of this contract.

Contractor's Bond.

18. The Contractor shall execute a bond in the sum of Six Thousand Dollars ($6,000.00) for the performance of the work under this contract, with good and sufficient sureties, the same to be saisfactory to the Board of Trustees of the said Sanitary District, conditioned upon the faithful performance of all of the terms and conditions of this contract and specifications and should the sureties on any bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days notice thereof to said Contractor in writing, require said Contractor to furnish a new and additional bond in the sum of not to exceed Six Thousand Dollars ($6,000.00) with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of its Committee on Finance.
Attest:
L. F. King,
Clerk.

Edwards & Bradford Lumber Co. (Seal)
By B. K. Edwards,
President.
Attest:
H. H. Jarvis,
Treasurer.

Approved October 1, 1919:
H. P. Ramey,
Division Engineer.
G. M. Wisner,
Chief Engineer.
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Edwards & Bradford Lumber Company, a corporation organized under the laws of the State of Iowa as principal and the Maryland Casualty as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Six Thousand Dollars ($6,000.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 18th day of September, A. D. 1919.

The Condition of the Above Obligation is Such, That whereas, the above bounden Edwards & Bradford Lumber Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 18th day of September, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for furnishing and delivering coal screenings to The Sanitary District of Chicago into the bins of the Lawrence Avenue pumping station.

Now, if the said Edwards & Bradford Lumber Company shall in all respects well and truly keep and perform the said contract on its part, and in the time and manner therein prescribed and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, and attorneys' fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, which may in anywise result from the carelessness or neglect of said Edwards & Bradford Lumber

Company, its agents, employees or workmen, in any respect whatsoever, or which may result in account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever including all valid claims and demands for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment," approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto which may accrue o each and every person who shall be employed by said Edwards & Bradford Lumber Company in or about the performance of said contract or which shall accrue to the beneficiaries of any such person, then in this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said Edwards & Bradford Lumber Company or its agents, employees or workmen, in the premises, and also that any judgment of any court, or award of any Board of Arbitrators, or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto, relating to the compensation for accidental injuries or deaths suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Edwards & Bradford Lumber Company shall be conclusive, against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

Edwards & Bradford Lumber Co. (Seal)
By B. K. Edwards,
President.

Maryland Casualty Company. (Seal)
By A. P. Alford,
Attorney-in-Fact.

Attest:
H. H. Jarvis,
Treasurer.

Approved as to form October 1, 1919:
Chas. E. Anthony,
Assistant Attorney.

C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance reports that it has examined and approved the bond of the Edwards & Bradford Lumber Company with the Maryland Casualty Company thereon as surety, for the faithful performance of its contract for furnishing and delivering coal screenings on board cars on the side track of the 39th street pumping station for the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the Edwards & Bradford Lumber Company for the faithful performance of the above specified contract, said bond being in the penal sum of $15,000.00 be, and the same is hereby approved, and it is further

Ordered, That the form of said con-

tract and bond be prnited in the Proceedings of the Board.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond between the Edwards & Bradford Lumber Company and the Sanitary District of Chicago.

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR FURNISHING AND DELIVERING COAL AT THE THIRTY-NINTH STREET PUMPING STATION.

THIS AGREEMENT, Made and entered into this 18th day of September, A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Edwards & Bradford Lumber Company, a corporation organized under the laws of the State of Iowa, party of the second part, hereinafter designated the Contractor.

WITNESSETH: That the said Contractor has covenanted, contracted and agreed, and by these presents doe scovenant, contract and agree with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under penalty expressed in the bond, bearing even date herewith, hereto attached, at his proper cost and expense to furnish and deliver all coal called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter stipulated, and said Sanitary District has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with said Contractor to order, accept, receive and pay for all coal so furnished and delivered, in the manner and under the conditions hereinafter stipulated.

It is further covenanted and agreed that the coal furnished and delivered shall be measured and tested under the direction and supervision of the Chief Engineer of The Sanitary District of Chciago, and by the duly appointed agent of said Sanitary District, by whose measurements and calculations the quantities and quality of the coal furnished and delivered under this contract, and the rates of payment therefor, shall be determined, and said coal shall be accepted or condemned. The said Chief Engineer or other engineer designated by the Sanitary District shall have full power to reject or condemn any or all coal furnished and delivered under this contract which in his opinion does not conform to its spirit and to the terms and conditions herein expressed.

Wherever the words "Chief Engineer" or "Engineer" are used herein they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other Engineer designated by said Sanitary District.

SPECIFICATIONS

FOR FURNISHING AND DELIVERING COAL ON TRACK AT 39TH STREET PUMPING STATION.

General.

1. This contract includes the furnishing and delivering of coal as hereinafter specified on board cars on the side track of the 39th Street Pumping Station of The Sanitary District of Chicago, in Chicago, Illinois, from May 1, 1919, until May 1, 1920, inclusive.

Description of Coal Required.

2. Coal shall be of good quality of bituminous coal screenings reasonably free from slate, dirt and other foreign matter coming from mines located along the right-of-way and tracks of the Illinois Central Railroad Company, or directly connected therewith by connecting spur tracks, which coal shall conform to these specifications:

Size.

3. Screenings shall consist of all coal as mined passing between bars the minimum width between which is one and

one-quarter (1¼) inches. Screenings shall contain not more than forty (40) per cent by weight of matter that will pass through a screen with one-quarter (¼) inch round holes.

B. T. U.

4. Screenings shall contain not less than twelve thousand three hundred (12,300) British thermal units per pound of dry coal.

Ash.

5. Screenings shall contain not more than fifteen (15) pre cent of ash for dry coal.

Quantity.

6. The probable quantity of coal required is estimated at an average of two thousand (2,000) tons per month, the consumption varying considerably from month to month during the year. The quantity is given only as an approximation and it is hereby distinctly understood and agreed that the Contractor shall furnish at the price determined as per Sections twelve (12) and thirteen (13) hereof, the quality of coal required to operate the pumping station during the period of this contract as may be ordered by the Chief Engineer, be the same more or less than the quantity herein mentioned. The Contractor further agrees that any difference between the quantity of coal mentioned in the advertisement and the quantities of coal actually delivered hereunder shall not invalidate this contract or release the contractor from delivering all quantities of coal required by the pumping station as ordered by the Engineer, and the Contractor shall not be entitled to any extra payment for damages or for loss of profits because of a difference between said quantity of coal mentioned in the advertisement for proposals and the quantities of coal actually ordered and delivered under this contract. The Contractor shall keep himself informed as to the rate of consumption from time to time and shall bear all demurrage charges caused by the delivery of coal more rapidly than the existing provisions for storage will allow of unloading and storing.

Purchase of Coal on the Open Market.

7. Should the Contractor fail to furnish and deliver coal of the quality equal, or superior, to the coal herein specified, then the said Sanitary District may declare this contract forfeited, either as to a portion of the same or the whole thereof and the Chief Engineer may purchase on the open market, at the lowest price then obtainable, such quantity, or quantities, of coal equal or superior to that herein specified as the Contractor shall fail to furnish and deliver or as may be needed from time to time by the requirements of said pumping station until May 1, 1920, notwithstanding such forfeiture. The Sanitary District shall not be obliged to have tested or analysed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station as above specified in excess of the c hereunder to said Sanitary District for an equal quantity of coal of a corresponding grade if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said contractor.

Should the Contractor fail to furnish and deliver coal in such quantities, or at such times, as the requirements of said pumping station may demand, or as ordered by the Chief Engineer of said Sanitary District, then said Chief Engineer may purchase in the open market, at the lowest price then obtainable, such quantity or quantities of coal equal or superior to that herein specified as the said Contractor shall fail to furnish and deliver or as may be needed by the requirements of said pumping station until May 1, 1920. The Sanitary District shall not be obliged to have tested or analysed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of the grade herein specified if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said Contractor.

Weights.

8. The weights of the coal delivered shall be determined on scales under the supervision of the railroad over whose lines the coal is shipped, exept in cases where the Chief Engineer of the Sanitary District elects to check the weights, in which case the weights shall be deter-

mined on the scales of the said Sanitary District at the pumping station. In cases where said Sanitary District weights are to govern, the Contractor, his duly accredited agent or some person in the office of said contractor, will be notified by telephone and if he so requests, will be given two (2) hours in which to reach the pumping station to check said weights. A ton is two thousand (2,000) pounds avoirdupois. All shipments shall be consigned to the Contractor at the point of delivery and receipted railroad freight bills showing the origin of the shipment, car numbers, routing, weights and date of shipment shall be promptly furnished by the contractor to the Sanitary District.

9. It is hereby understood and agreed that all deliveries under this contract will be made subject to a failure of the railroads to supply sufficient or suitable equipment, to strikes, labor agitations and disturbances, to mine accidents and other causes beyond the control of said contractor.

Samples.

10. The Sanitary District will appoint an agent to select a representative sample of coal from each car load delivered under this contract. Such agent will make the tests and analyses hereinafter specified from any single sample taken from any car load of coal or from the combination of samples taken from not to exceed six car loads of coal consecutively delivered to the Sanitary District. This work will be done by the Sanitary District at its sole cost and expense.

11. If the contractor so requests in writing, the Chief Engineer of said Sanitary District or said duly appointed agent will notify said Contractor, his duly appointed agent or some person in the office of said contractor by telephone at least two hours in advance of the time when any sample of coal is to be selected, so that said contractor may have a representative present at said time and in that event the sample or samples then selected shall each be divided into three equal portions which shall each be deposited in a suitable receptacle and made air tight. One of said portions of each sample shall be delivered to the contractor, the second portion of same to the agent of the Sanitary District and the third portion of same shall be sealed in the presence of the agents of both parties hereto and delivered to the agent of the Sanitary District and held by him for further use as hereinafter specified.

If the contractor, his duly appointed agent or person in his office after being notified as herein specified, refuses, fails or neglects to be present at the time any sample of said coal is selected, then said agent of said Sanitary District may select a sample of said coal and subject the same or said combined sample including same, to the tests hereinafter specified.

If the said contractor, his agent or person in his office after being notified as herein specified shall refuse, fail or neglect to be present on three consecutive occasions when the samples are selected, then such samples of coal may thereafter be taken and said sample or combined sample tested and analyzed by said agent of said Sanitary District without notifying said contractor until said contractor shall again request said Sanitary District to notify him, his duly appointed agent or someone in his office of the time when such samples are to be selected.

Tests and Analyses.

12. The Sanitary District agrees to have the samples selected at any one time, or a combined sample above provided for, tested and analyzed by said duly appointed agent by the method described in Bulletin 22 of the Bureau of Mines, Department of the Interior, and a copy of each test and analysis shall be delivered by said agent to each of the parties hereto.

In this test and analysis the British Thermal Units delivered in each car load of coal shall be determined from each sample or combined sample as follows:

Multiply the number of British Thermal Units per pound of dry coal by the percentage of moisture (expressed in decimals.)

Subtract the product so found from the number of British Thermal Units per pound of dry coal.

The result is the British Thermal Units per pound of coal as delivered for that sample which result shall be applied in determining the British Thermal Unit in the coal contained in the car or cars from which said sample or samples so combined have been taken.

The contractor and the Sanitary District shall be bound by the report of the test and analysis of any sample of coal taken at any time or a combined

sample thereof when the contractor has not requested in writing that he desires his representative to be present when the samples are taken or after he has made such request and fails or refuses to have a representative present.

If the Contractor or his reprensentative is present when any sample is selected he and said Sanitary District shall be bound by the report of the test and analysis of the second portion of any sample deposited in said suitable air tight receptacle and delivered to the agent of the Sanitary District as above specified unless he objects, giving his reason for such objection in writing to said report, within five (5) days from the receipt of the same.

If said Contractor does so object to said report then the third portion of said sample, which was sealed and delivered to the agent of the Sanitary District for further use, shall be delivered with seal unbroken to a chemist of high standing to be mutually agreed upon by the parties hereto and tested and analyzed by such chemist within ten (10) days from the receipt of such sample at the sole expense of said Contractor and the test and analysis so made shall be final and binding upon the parties hereto, and the price to be paid said Contractor for the car loads of coal represented by said samples shall be determined by said report, and in the event that such test and analysis is not reported to the Sanitary District wihin said period of ten (10) days then the parties hereto agree that the report of the first analysis shall be final and binding upon the parties hereto. In case said parties do not mutually agree upon said chemist, then upon the application of either of the parties hereto the then Chief Justice of the Circuit Court of Cook County, Illinois, may appoint such chemist who shall test and analyze said third sample of coal as herein specified at the sole expense of said Contractor, including all court expenses. The decision of said chemist shall be final and binding upon both parties hereto.

Determination of Price.

13. The price per ton to be paid for all the coal delivered during any month shall be determined by dividing the average number of British Thermal Units per ton of coal delivered during the month by the number of British Thermal Units for one cent calculated from the Contractor's guaranteed analysis and subtracting from the result obtained one cent for each percent of ash for dry coal delivered. The resulting value will be the price per ton which will be paid for that particular coal except as hereinafter specified. The name of the coal to be supplied, the locality from which said coal is to be supplied and the said guaranteed analysis is as follows:

Name ..... "Economy"

Locality.....Williamson County, Illinois

Guaranteed Analysis.

Moisture % as delivered..... 7%
Ash %, dry coal.....13%
B. T. U. per lb. dry coal.....12.300

Price.

Three and seventy-five one-hundredths dollars ($3.75) per ton.

Above price is subjet to increase or decrease by change in miners' scale or freight rate.

Rejection of Coal.

14. The Chief Engineer of said Sanitary District may, at its option, reject any coal which the analysis report shows does not comply with the requirements of Sections 3, 4 and 5, or may accept the same subject to the following reductions in the price per ton as computed in accordance with Section 12:

For each one (1) percent of coal in excess of forty (40) percent passing through a screen with one-quarter (¼) inch holes, a reduction of four (4) cents per ton.

For each one hundred (100) B. T. U. (or fraction thereof greater than fifty (50) that the B. T. U. content falls below twelve thousand three hundred (12,300), a reduction of six (6) cents per ton.

For each one (1) percent that the ash content exceeds fifteen (15) percent, a reduction of ten (10) cents per ton.

Payments.

15. Payment for coal delivered and accepted during any month will be within the following month at the rate herein specified under "Determination of Price" (See Section 12 and 13), provided that the requirements regarding freight bills have been complied with.

Examination of Premises.

16. All bidders for furnishing and delivering of coal under this contract are required before submitting proposals, to carefully examine the premises at the pumping station and to make all necessary examinations and investigations to inform themselves thoroughly as to the facilities for delivering coal in the quantities and in the manner specified in this contract and in the specifications forming part of same, the existing storage capacity of the station, and to inform themselves thoroughly as to all of the difficulties that may be involved in the complete fulfillment of all of the terms and conditions of this contract and specifications. No plea of ignorance of conditions that exist or that may hereafter exist or of difficulties that may be encountered in the fulfillment of all of the terms and conditions of this contract and specifications, due to a failure on the part of the bidder to make the necessary examinations and investigations that would disclose same, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract and specifications, or will be accepted as a basis for any claims whatsoever for extra compensation.

Employers' Liability Act.

17. The Contractor further agrees to insure to his employees or their beneficiaries the compensation provided for in the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and for a penalty for its violation, and repealing an Act, entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employees in or about the performance of this contract.

Contractor's Bond.

18. The Contractor shall execute a bond in the sum of fifteen thousand dollars ($15,000.00) for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the said Sanitary District, conditioned upon the faithful performance of all of the terms and conditions of this contract and specifications and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days notice thereof to said Contractor in writing, require said Contractor to furnish a new and additional bond in the sum of not to exceed fifteen thousand dollars ($15,000.00) with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed and the party of the second part has caused these presents to be executed in duplicate by its President to be duly attested and the corporate seal to be hereunto affixed.

The Sanitary District of Chicago.

By James H. Lawley,

Chairman of Its Committee on Finance.

Attest:

L. F. King,

Clerk.

Edwards & Bradford Lumber Co. (Seal)

By B. K. Edwards,

President.

Attest:

H. H. Jarvis,

Treasurer.

[redacted]

Approved October 1, A. D. 1919:

H. P. RAMEY,
Division Engineer.

G. M. WISNER,
Chief Engineer.

CHAS. E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

CONTRACTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, the Edwards & Bradford Lumber Company, a corporation organized under the laws of the state of Iowa as principal and the Maryland Casualty Company as surety are held and firmly bound unto The Sanitary District of Chicago in the penal sum of fifteen thousand dollars ($15,000.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 18th day of September A. D., 1919.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas, the above bounden Edwards & Bradford Lumber Company, has entered into a certain contract with The Sanitary District of Chicago, bearing date the 18th day of September A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for furnishing and delivering coal screenings to the Sanitary District of Chicago on board cars on the side track of the 39th street pumping station as specified in the attached contract.

Now, if the said Edwards & Bradford Lumber Company shall in all respects well and truly keep and perform the said contract on its part, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, and attorneys' fees, which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, which may in anywise result from the carelessness or neglect of said Edwards & Bradford Lumber Company, its agents, employee or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever including all valid claims and demands for compensation for accidental injuries or deaths, under the provisions of the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment," approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto which may accrue to each and every person who shall be employed by said Edwards & Bradford Lumber Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

AND IT IS HEREBY EXPRESSLY UNDERSTOOD AND AGREED, and made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said Edwards & Bradford Lumber Company or their agents, employees or workmen, in the premises, and also that any judgment of any court, or award of any Board of Arbitrators, or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved

June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto, relating to the compensation for accidental injuries or deaths suffered by employees, in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Edwards & Bradford Lumber Company shall be conclusive, against each and all parties to this obligation, as to amount, liability and all other things pertaining thereto.

EDWARDS & BRADFORD LUMBER CO. (Seal)

By B. K. EDWARDS,
President.

Attest:

H. H. JARVIS,
Treasurer.

MARYLAND CASUALTY COMPANY.

By O. P. ALFORD,
Attorney-in-Fact.

Approved as to form October 1, 1919:

CHAS. E. ANTHONY,
Assistant Attorney.

C. ARCH WILLIAMS,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has examined and approved the bond of the Edwards and Bradford Lumber Company with the Maryland Casualty Company thereon as surety for the faithful performance of its contract for furnishing and delivering 1,000 tons of coal screenings on board cars on the side track of the H. N. May station for the Sanitary District, and therefore recommends the passage of the following order:

Ordered, That the bond of the Edwards & Bradford Lumber Company for the faithful performance of the above specified contract, said bond being in the penal sum of $1,800.00 be, and the same is hereby, approved, and it is further

Ordered, That the form of said contract and bond be printed in the Proceedings of the Board.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.

MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

The following is the contract and bond between the Edwards & Bradford Lumber Company and The Sanitary District of Chicago:

THE SANITARY DISTRICT OF CHICAGO.

CONTRACT AND SPECIFICATIONS FOR FURNISHING AND DELIVERING COAL AT THE H. N. MAY PUMPING STATION.

ING STATION.

THIS AGREEMENT, Made and entered into this 18th day of September A. D. 1919, by and between The Sanitary District of Chicago, a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, party of the first part, hereinafter designated the Sanitary District, and the Edwards & Bradford Lumber Company, a corporation organized under the laws of the State of Iowa, party of the second part, hereinafter designated the Contractor.

WITNESSETH—That the said Contractor has covenanted, contracted and agreed and by these presents does covenant, contract and agree with the said Sanitary District, for and in consideration of the payments made as provided for herein, to the Contractor by the said Sanitary District, and under penalty expressed in the bond, bearing even date herewith, hereto attached, at his proper cost and expense to furnish and

deliver all coal called for by this agreement (free from all claims, liens and charges whatsoever), in the manner and under the conditions hereinafter stipulated, and said Sanitary District has covenanted, contracted and agreed and by these presents does covenant, contract and agree with said Contractor to order, accept, receive and pay for all coal so furnished and delivered, in the manner and under the conditions hereinafter stipulated.

It is further covenanted and agreed that the coal furnished and delivered shall be measured and tested under the direction and supervision of the Chief Engineer of The Sanitary District of Chicago, and by the duly appointed agent of said Sanitary District, by whose measurements and calculations the quantities and quality of the coal furnished and delivered under this contract, and the rates of payment therefor, shall be determined, and said coal shall be accepted or condemned. The said Chief Engineer or other engineer designated by the Sanitary District shall have full power to reject or condemn any or all coal furnished and delivered under this contract which in his opinion does not conform to its spirit and to the terms and conditions herein expressed.

Wherever the words "Chief Engineer" or "Engineer" are used herein they shall be understood to mean the Chief Engineer of The Sanitary District of Chicago or other Engineer designated by said Sanitary District.

SPECIFICATIONS

FOR FURNISHING AND DELIVERING COAL ON TRACK AT LAWRENCE AVE. PUMPING STATION.

General.

1. This contract includes the furnishing and delivering of coal as hereinafter specified on board cars on the side track of the H. N. May Station of The Sanitary District of Chicago, in Chicago, Illinois.

Description of Coal Required.

2. Coal shall be of good quality of bituminous coal screenings reasonably free from slate, dirt and other foreign matter, and shall conform to the following specifications:

Size.

3. Screenings shall consist of all coal as mined passing between bars the minimum width between which is one and one-quarter (1¼) inches. Screenings shall contain not more than forty (40) percent by weight of matter that will pass through a screen with one-quarter (¼) inch round holes.

B. T. U.

4. Screenings shall contain not less than twelve thousand three hundred (12,300) British thermal units per pound of dry coal.

Ash.

5. Screenings shall contain not more than fifteen (15) per cent of ash for dry coal.

6. The amount of coal to be furnished under this contract is 1,000 tons, to be shipped as follows:

One car containing approximately 40 tons of coal every day for a period of ten days, beginning 48 hours after the approval by the Board of Trustees of the Sanitary District of the bond herein specified to be furnished by said Contractor, and thereafter one car containing approximately 40 tons of coal every other day until a total of 1,000 tons of coal has been delivered.

It is understood that said cars of coal must be unloaded by the Sanitary District by hand and therefore said Contractor hereby agrees to ship said coal in open cars.

The Contractor hereby agrees to bear all demurrage charges caused by shipping said coal more rapidly than herein specified or caused by carriers bunching said cars in transit.

6. The probable quantity of coal required is estimated at an average of four hundred tons per month, the consumption varying considerably from month to month during the year. The quantity is given only as an approximation and it is hereby distinctly understood and agreed that the Contractor shall furnish at the price determined as per sections twelve (12) and thirteen (13) hereof, the quantity of coal required to operate the pumping station during the period of this contract as may be ordered by the Chief Engineer, be the same more or less than the quantity herein mentioned. The Contractor further agrees that any difference between the quantity of coal mentioned in the advertisement and the quantities of coal actually delivered hereunder shall not invalidate this contract or release the Contractor from delivering all quantities of coal required by the pumping station as ordered by the Engineer, and the Contractor shall not

be entitled to any extra payment for damages or for loss of profits because of a difference between said quantity of coal mentioned in the advertisement for proposals and the quantities of coal actually ordered and delivered under this contract. The Contractor shall keep himself informed as to the rate of consumption from time to time and shall bear all demurrage charges caused by the delivery of coal more rapidly than the existing provisions for storage will allow of unloading and storing.

Purchase of Coal on the Open Market.

7. Should the Contractor fail to furnish and deliver coal of the quality equal, or superior, to the coal herein specified, then the said Sanitary District may declare this contract forfeited, either as to a portion of the same or the whole thereof and the Chief Engineer may purchase on the open market, at the lowest price then obtainable, such quantity, or quantities, of coal equal or superior to that herein specified as the Contractor shall fail to furnish and deliver as herein specified, notwithstanding such forfeiture. The Sanitary District shall not be obliged to have tested or analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station as above specified in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of a corresponding grade if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said contractor.

Should the Contractor fail to furnish and deliver coal in such quantities, or at such times as the requirements of said pumping station may demand, or as ordered by the Chief Engineer of said Sanitary District, then said Chief Engineer may purchase in the open market at the lowest price then obtainable, such quantity or quantities of coal equal or superior to that herein specified as the said Contractor shall fail to furnish and deliver as herein specified. The Sanitary District shall not be obliged to have tested or analyzed the coal so purchased on the open market. The cost of said coal so purchased and all costs and expenses incurred by the Chief Engineer of said Sanitary District in purchasing and delivering such coal at the said pumping station in excess of the cost hereunder to said Sanitary District for an equal quantity of coal of the grade herein specified if furnished and delivered by said Contractor at the said pumping station as specified, shall be paid to the Sanitary District by said Contractor.

Weights.

8. The weights of the coal delivered shall be determined on scales under the supervision of the railroad over whose lines the coal is shipped, except in cases where the Chief Engineer of the Sanitary District elects to check the weights, in which case the weights shall be determined on the scales of the said Sanitary District at the pumping station. In cases where said Sanitary District weights are to govern, the Contractor, his duly accredited agent or some person in the office of said contractor, will be notified by telephone and if he so requests, well be given two (2) hours in which to reach the pumping station to check said weights. A ton is two thousand (2,000) pounds avoirdupois. All shipments shall be consigned to the Contractor at the point of delivery and receipted railroad freight bills showing the origin of the shipment, car numbers, routing, weights and date of shipment shall be promptly furnished by the contractor to the Sanitary District.

9. It is hereby understood and agreed that all deliveries under this contract will be made subject to a failure of the railroad to supply sufficient or suitable equipment, to strikes, labor agitations and disturbances, to mine accidents and other causes beyond the control of said contractor.

Samples.

10. The Sanitary District will appoint an agent to select a representative sample of coal from each car load delivered under this contract. Such agent will make the tests and analyses hereinafter specified from any single sample taken from any car load of coal or from the combination of samples taken from not to exceed six car loads of coal consecutively delivered to the Sanitary District. This work will be done by the Sanitary District at its sole cost and expense.

11. If the contractor so requests in writing, the Chief Engineer of said Sanitary District or said duly appointed agent will notify said Contractor, his duly appointed agent or some person in the office of said contractor by telephone

at least two hours in advance of the time when any sample of coal is to be selected, so that said contractor may have a representative present at said time and in that event the sample or samples then selected shall each be divided into three equal portions which shall each be deposited in a suitable receptable and made air tight. One of said portions of each sample shall be delivered to the contractor, the second portion of same to the agent of the Sanitary District and the third portion of same shall be sealed in the presence of the agents of both parties hereto and delivered to the agent of the Sanitary District and held by him for further use as hereinafter specified.

If the contractor, his duly appointed agent or person in his office after being notified as herein specified, refuses, fails or neglects to be present at the time any sample of said coal is selected, then said agent of said Sanitary District may select a sample of said coal and subject the same or said combined sample including same, to the tests hereinafter specified.

If the said contractor, his agent c person in his office after being notified as herein specified shall refuse fail or neglect to be present on three consecutive occasions when the samples are selected, then such samples of coal may thereafter be taken and said sample or combined sample tested and analyzed by said agent of said Sanitary District without notifying said contractor until said contractor shall again request said Sanitary District to notify him, his duly appointed agent or someone in his office of the time when such samples are to be selected.

Tests and Analyses.

12. The Sanitary District agrees to have the samples selected at any one time, or a combined sample above provided for, tested and analyzed by said duly appointed agent by the method described in Bulletin 22 of the Bureau of Mines, Department of the Interior and a copy of each test and analysis shall be delivered by said agent to each of the parties hereto.

In this test and analysis the British Thermal Units delivered in each car load of coal shall be determined from each sample or combined sample as follows:

Multiply the number of British Thermal Units per pound of dry coal by the percentage of moisture (expressed in decimals).

Subtract the product so found from the number of British Thermal Units per pound of dry coal.

The result is the British Themal Units per pound of coal as delivered for that sample which result shall be applied in determining the British Thermal Unit in the coal contained in the car or cars from which said sample or samples so combined have been taken.

The contractor and the Sanitary District shall be bound by the report of the test and analysis of any sample of coal taken at any time or a combined sample thereof when the contractor has not requested in writing that he desires his representative to be present when the samples are taken or after he has made such request and fails or refuses to have a representative present.

If the Contractor or his representative is present when any sample is selected he and said Sanitary District shall be bound by the report of the test and analysis of the second portion of any sample deposited in said suitable air tight receptacle and delivered to the agent of the Sanitary District as above specified unless he objects, giving his reason for such objection in writing to said report within five (5) days from the receipt of the same.

If said Contractor does so object to said report then the third portion of said sample, which was sealed and delivered to the agent of the Sanitary District for further use, shall be delivered with seal unbroken to a chemist of high standing to be mutually agreed upon by the parties hereto and tested and analyzed by such chemist within ten (10) days from the receipt of such sample at the sole expense of said Contractor and the test and analysis so made shall be final and binding upon the parties hereto, and the price to be paid said Contractor for the car loads of coal represented by said samples shall be determined by said report, and in the event that such test and analysis is not reported to the Sanitary District within said period of ten (10) days then the parties hereto agree that the report of the first analysis shall be final and binding upon he parties hereto. In case said parties do not mutually agree upon said chemist, then upon the application of either of the parties

hereto the then Chief Justice of the Circuit Court of Cook County, Illinois, may appoint such chemist who shall test and analyze said third sample of coal as herein specified, at the sole expense of said Contractor, including all court expenses. The decision of said chemist shall be final and binding upon both parties hereto.

Determination of Price.

13. The price per ton to be paid for all the coal delivered during any month shall be determined by dividing the average number of British Thermal Units per ton of coal delivered during the month by the number of British Thermal Units for one cent calsulated from the Contractor's guaranteed analysis and subtracting from the result obtained one cent for each percent of ash for dry coal delivered. The resulting value will be the price per ton whcih will be paid for that particular coal except as hereinafter specified. The name of the coal to be supplied, the locality from which said coal is to be supplied and the said guanranteed analysis is as follows:

Guaranteed Analysis.

Name ..... "Economy"
Locality ..... Williamson County

Guaranteed Analysis.

Moisture %, as delivered 7%
Ash %, dry coal 13%
B. T. U. per lb. dry coal 12.300

Price.

Three and eighty hundredths dollars ($3.80) per ton.

Above price is subject to increases or decreases by change of miners scale or freight rates.

Rejection of Coal.

14. The Chief Engineer for said Sanitary District may, at its option, reject any coal which the analysis report shows does not comply with the requirements of sections 3, 4 and 5, or may accept the same subject to the following reductions in the price per ton as computed in accordance with section 12:

For each one (1) percent of coal in excess of forty (40) percent passing through a screen with one-quarter (¼) inch holes, a reduction of four (4) cents per ton.

For each one hnudred (100) B. T. U. (or fraction thereof greater than fifty (50) that the B. T. U. content falls below twelve thousand three hundred (12,300), a reduction of six (6) cents per ton.

For each one (1) percent that the ash content exceeds fifteen (15) percent, a reduction of ten (10) cents per ton.

Payments.

15. Payment for coal delivered and accepted during any month will be within the following month at the rate herein specified under "Determination of Price" (See Section 12 and 13), provided that the requirements regarding freight bills have been complied with.

Examination of Premises.

16. All bidders for furnishing and delivering of coal under this contract are required before submitting proposals, to carefully examine the premises at the pumping station and to make all necessary examinations and investigations to inform themselves thoroughly as to the facilities for delivering coal in the quantities and in the manner specified in this contract and in the specificatons forming part of same, the existing storage capacity of the station, and to inform themselves thoroughly as to all of the difficulties that may be involved in the complete fulfillment of all of the terms and conditions of this contract and specifications. No plea of ignorance of conditions that exist or that may hereafter exist or of difficulties that may be encountered in the fulfillment of all of the terms and conditions of this contract and specifications, due to a failure on the part of the bidder to make the necessary examinations and investigations that would disclose same, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all of the requirements of this contract and specifications, or will be accepted as a basis for any claims whatsoever for extra compensation.

Employers' Liability Act.

17. The Contractor further agrees to insure to his employes or their beneficiaries the compensation provided for in

the Act of the General Assembly of the State of Illinois, entitled, "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and for a penalty for its violation, and repealing an Act, entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all acts amendatory thereof and supplementary thereto, and further agrees to indemnify, keep and save harmless said Sanitary District from all claims, judgments, awards and costs which may in anywise come against said Sanitary District by reason of any accidental injuries or death suffered by any of his employes in or about the performance of this contract.

Contractor's Bond.

18. The Contractor shall execute a bond in the sum of Eighteen Hundred Dollars ($1,800.00) for the performance of the work under this contract, with good and sufficient sureties, the same to be satisfactory to the Board of Trustees of the said Sanitary District, conditioned upon the faithful performance of all of the terms and conditions of this contract and specifications, and should the sureties on said bond at any time fail financially, or be, in the opinion of the said Board of Trustees, insufficient security for the penalty of said bond, then, in that case, the said Board of Trustees may, on giving ten (10) days' notice thereof to said Contractor in writing, require said Contractor to furnish a new and additional bond in the sum of not to exceed Eighteen Hundred Dollars ($1,800.00), with such sureties thereon as shall be satisfactory to the Board of Trustees of said Sanitary District.

In Witness Whereof, On the day and year first above written, The Sanitary District of Chicago has caused these presents to be executed in duplicate by the Chairman of its Committee on Finance, and to be duly attested, and its corporate seal to be hereunto affixed, and the party of the second part has caused these presents to be executed in duplicate by its President, to be duly attested and its corporate seal to be hereunto affixed.

The Sanitary District of Chicago.
By Jas. H. Lawley,
Chairman of Its Committee on Finance.
Attest:
L. F. King,
Clerk.

Edwards & Bradford Lumber Co. (Seal)
By B. K. Edwards,
President.
Attest:
H. H. Jarvis,
Treasurer.
Approved October 1, 1919:
H. P. Ramey,
Division Engineer.
G. M. Wisner,
Chief Engineer.
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

CONTRACTOR'S BOND.

Know All Men by These Presents, That we, the Edwards & Bradford Lumber Company, a corporation organized under the laws of the State of Iowa, as principal, and the Maryland Casualty Company as surety, are held and firmly bound unto The Sanitary District of Chicago in the penal sum of Eighteen Hundred Dollars ($1,800.00) lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our hands and seals and dated this 18th day of September, A. D. 1919.

The Condition of the Above Obligation is Such, That whereas, the above bounden Edwards & Bradford Lumber Company has entered into a certain contract with The Sanitary District of Chicago, bearing date the 18th day of September, A. D. 1919, for doing all the work and furnishing all the materials, tools, labor, appliances and appurtenances necessary for furnishing and delivering one thousand tons of coal screenings on board cars on the side-

track of the H. N. May Station as specified in the attached contract.

Now, If he said Edwards & Bradford Lumber Company shall in all respects well and truly keep and perform the said contract on its part, and in the time and manner therein prescribed, and further, shall protect, indemnify, keep and save harmless The Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, and attorneys' fees which may in anywise come against said The Sanitary District of Chicago in consequence of the awarding of such contract, which may in anywise result from the carelessness or neglect of said Edwards & Bradford Lumber Company, its agents, employes or workmen, in any respect whatsoever, or which may result on account of any infringement of any patent by reason of the materials, machinery, processes, devices or apparatus used or furnished in the performance of said contract, and moreover shall pay to said The Sanitary District of Chicago any sum or sums of money determined by the Engineer to be due said The Sanitary District of Chicago by reason of any failure or neglect in the performance of said contract, and shall pay all valid claims and demands whatsoever, including all valid claims and demands for compensation for accidental injuries or death, under the provisions of the Act of the General Assembly of the State of Illinois, entitled "An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment within this State; providing for the enforcement and administering thereof, and a penalty for its violation, and repealing an Act entitled, 'An Act to promote the general welfare of the people of this State by providing compensation for accidental injuries or death suffered in the course of employment,' approved June 10, 1911, in force May 1, 1912," approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto which may accrue to each and every person who shall be employed by said Edwards & Bradford Lumber Company in or about the performance of said contract, or which shall accrue to the beneficiaries of any such person, then is this obligation to be null and void, otherwise to remain in full force and effect.

And It Is Hereby Expressly Understood and Agreed, And made a condition hereof, that any judgment rendered against said The Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by carelessness or neglect of said Edwards & Bradford Lumber Company, or its agents, employes or workmen in the premises, and also that any judgment of any court, or award of any Board of Arbitrators, or of the State Industrial Board of the State of Illinois, rendered against said The Sanitary District of Chicago in any suit or claim arising under the said Act of the General Assembly of the State of Illinois, approved June 28, 1913, in force July 1, 1913, and all Acts amendatory thereof and supplementary thereto, relating to the compensation for accidental injuries or deaths suffered by employes in the course of their employment, when notice of the pendency of such suit, hearing or arbitration shall have been given said Edwards & Bradford Lumber Company, shall be conclusive against each and all parties to this obligation as to amount, liability and all other things pertaining thereto.

Edwards & Bradford Lumber Co. (Seal)
By B. K. Edwards,
President.

Attest:
H. H. Jarvis,
Treasurer.

Maryland Casualty Company.
By O. P. Alford,
Attorney-in-Fact.

Approved as to form October 1, 1919:
Chas. E. Anthony,
Assistant Attorney.
C. Arch Williams,
Attorney.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

Gentlemen—Your Committee on Finance, to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing and delivering cup grease to the Sanitary District under Division "I" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report

submitted by the Electrical Engineer, finds that the lowest responsible bidder is the Sinclair Refining Company.

Your Committee further reports that it is of the opinion that the said Company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing and delivering said cup grease, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering cup grease to the Sanitary District under Division "I" of the specifications be, and the same is hereby awarded to the Sinclair Refining Company for the price named in its bid of six cents per pound; and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate, the said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Sinclair Refining Company, and a bond for the faithful performance of said work shall have been furnished by said company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishing and delivering said cup grease be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing and delivering cylinder oil to the Sanitary District under Division "C" of the specifications, having considered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the William H. Reid Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing said oil and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering cylinder oil to the Sanitary District under Division "C" of the specifications be, and the same is hereby awarded to the William H. Reid Company for the price named in its bid of $0.38 per gallon, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute, in duplicate, the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by said William H. Reid Company and a bond for the faithful performance of said contract shall

have been furnished by said Company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishing and delivering said oil be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing and delivering transformer oil to the Sanitary District under Division "G" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, is of the opinion that the bid of the Sinclair Refining Company should be rejected, for the reason that tests of the oil offered do not meet the requirements of the specifications and finds that the lowest responsible bidder is the Standard Oil Company.

Your Committee further reports that it is of the opinion that the said Company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing and delivering said oil and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the bid of the Sinclair Refining Company for said oil be, and the same is hereby rejected, for the reason stated, and it is further

Ordered, That the contract for furnishing and delivering transformer oil to the Sanitary District under Division "G" of the specifications be, and the same is hereby awarded to the Standard Oil Company for the price named in its bid of 25.3 cents per gallon, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute, in duplicate, the said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Standard Oil Company, and a bond for the faithful performance of said work shall have been furnished by said company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishing and delivering said oil be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing hydro-turbine oil to the Sanitary District under Division "A" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, is of the opinion that all bids for furnish- said oil should be rejected for the reason that the same are excessive.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That all bids received for furnishing hydro-turbine oil to the Sanitary District under Division "A" of the specifications be and the same are hereby rejected for the reason stated, and it is further

Ordered, That the checks of the respective bidders for furnishing said oil be returned to said bidders.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Attorney in which he states in substance that the Board on September 18, 1919 (page 1184 of the Proceedings) authorized the payment to James O. Heyworth of the sum of $44,424.90 on account of work performed under his contract for the excavation and collateral work on section one of the Calumet-Sag Channel on certain terms and conditions expressed in the order of the Board relating thereto.

It appears that the Catholic Bishop of Chicago and F. J. Ruppert have filed claims with the Sanitary District alleging that they have sustained damage by reason of the work done by said James O. Heyworth in the performance of said work and in order to fully protect the District against such claims, the Attorney procured from said James O. Heyworth a bond to protect, indemnify and save harmless the Sanitary District against all liability which might come against it by reason of said claim and presented said bond to your Committee for its approval.

Your Committee further reports that it has examined said bond which is in the penal sum of $5,000.00 executed by said James O. Heyworth and the New Amsterdam Casualty Company and has approved the same.

Your Committee therefore recommends the passage of the following order:

Ordered, That the action of the Attorney in the premises be and the same is hereby ratified and confirmed, and it is further

Ordered, That the bond above specified be and the same is hereby approved.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings) bids for furnishing and delivering gasoline engine oil to the Sanitary District under Division "F" of the specifications, having considered all of the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the Sullivan Oil Company.

Your Committee further reports that it is of the opinion that said Company is competent to comply satisfactorily with the terms and conditions of the contract for furnishing said oil and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering gasoline engine oil to the Sanitary District under Division "F" of the specifications be, and the same is hereby awarded to the Sullivan Oil Company for the price named in its bid of $0.38 per gallon, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute, in duplicate, the said contract in accordance with the plans and specifications of the Sanitary District when the same shall have been executed by said Sullivan Oil Company and a bond for the faithful performance of said contract shall have been furnished by said Company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishing and delivering said oil be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance, to which were referred at the meeting of July 17, 1919 (page 878-A of the Proceedings), bids for furnishing and delivering engine oil to the San-

itary District under Division "E" of the specifications, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Electrical Engineer, finds that the lowest responsible bidder is the Standard Oil Company.

Your Committee further reports that it is of the opinion that said bidder is competent to comply satisfactorily with the terms and conditions of the contract for furnishing and delivering said oil, and having had the matter under consideration, recommends the passage of the following order:

Ordered, That the contract for furnishing and delivering engine oil to the Sanitary District under Division "E" of the specifications, be, and the same is hereby awarded to the Standard Oil Company for the price named in its bid of 21.3 cents per gallon, and it is further

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be and they are hereby authorized and directed to execute, in duplicate, the said contract in accordance with the specifications of the Sanitary District when the same shall have been executed by said Standard Oil Company and a bond for the faithful performance of said contract shall have been furnished by said Company and approved by the Committee on Finance, and it is further

Ordered, That the checks of the respective bidders for furnishing and delivering said oil be returned upon the execution and approval of said bond.

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT. A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 2, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll for Last Half of September, 1919.

L. F. King, Clerk (general payroll)	$ 31,117.55

Construction Account.

Nash-Dowdle Company (work on Evanston Sewage Pumping Station)	$ 21,164.94	
A. Guthrie & Co., Inc. (work on Section 13, Calumet-Sag Channel)	16,799.83	
A. Guthrie & Co., Inc. (work on Section 14, Calumet-Sag Channel)	130.46	
T. J. Forschner Contracting Company (work on Calumet Sewage Pumping Station)	126,750.92	
Leyden-Ortseifen Company (work on Desplaines River Sewage Treatment Works)	9,415.84	
Amounts carried forward	$174,261.99	$ 31,117.55

Amounts brought forward	$174,261.99	$ 31,117.55
Ready & Callaghan (construction of sprinkler filter and appurtenances in the Village of Morton Grove)	8,368.11	
Nash Bros. (work on Desplaines River Intercepting Sewer, Contract No. 1)	68,264.61	
Jas. A. Sackley Company (labor and material on account of paving Blue Island-Riverdale road)	5,887.00	
Eugene E. Maher (labor and material for Desplaines River Sewage Pumping Station, Division O)	1,187.81	
The Garden City Sand Company (crushed stone, sand and cement)	94.30	
Yeomans Bros. Company (repairs to pump)	68.15	
Edward Hines Lumber Company (lumber)	35.50	
Joseph McCarthy & Sons (covering roof and gutter)	35.00	
Stebbins Hardware Company (hardware supplies)	29.70	
Jos. T. Ryerson & Son (galvanized iron)	28.99	
Modjeski & Angier (inspection of reinforcing steel)	23.46	
Orrin Eames (rent)	20.00	
Evening American Publishing Company (advertising)	17.55	
Engineering & Contracting (advertisement)	17.25	
The Frederick Post Company (steel tapes)	10.00	
Modjeski & Angier (inspection of reinforcing steel)	8.27	
Chicago Steel Tape Company (steel tapes)	8.09	
Josephine Eck (rent)	8.00	
Kirby Motor Trucking Company (motor service)	6.00	
Standard Oil Company (kerosene)	5.40	
Chicago Towel Company (towel service)	5.25	
Nelson Bros. Laundry Company (towel service)	2.00	
Public Service Company of Northern Illinois (lighting service)	.75	
Commonwealth Edison Company (electrical energy)	.50	
		258,393.68
Maintenance and Operation Account.		
L. F. King, Clerk (expenses of employes)	$ 577.16	
L. F. King, Clerk (freight charges for coal to 39th St. Pumping Station)	421.61	
L. F. King, Clerk (freight charges for coal to 39th St. Pumping Station)	146.40	
L. F. King, Clerk (freight charges for coal to 39th St. Pumping Station)	89.59	
Wilbur J. Connell (supplies)	38.51	
L. F. King, Clerk (expenses of employes)	28.80	
L. F. King, Clerk (expenses of employes)	24.98	
L. F. King, Clerk (fuel, Lawrence Ave. Pumping Station)	82.84	
L. F. King, Clerk (freight charges on fuel, Lawrence Ave. Pumping Station)	90.60	
L. F. King, Clerk (freight charges on fuel, Lawrence Ave. Pumping Station)	79.66	
L. F. King, Clerk (demurrage charges)	2.00	
Geo. B. Carpenter & Co. (station supplies)	6.99	
L. F. King, Clerk (special roll, Lawrence Ave.)	175.00	
Theo. B. Robertson Products Company (soap powder)	15.52	
L. F. King, Clerk (gas service, Lawrence Ave. Pumping Station)	.77	
Bickett Coal & Coke Company (coal, Lawrence Ave. Pumping Station)	497.01	
Kellogg-Mackay Company (ells, Lawrence Ave. Pumping Station)	7.44	
Conroy Boiler & Tank Works (repairs to boilers, etc., Lawrence Ave. Pumping Station)	162.18	
Amounts carried forward	$ 2,447.06	$289,511.23

Amounts brought forward	$ 2,447.06	$289,511.23
North Shore Ash Company (removing ashes, Lawrence Ave. Pumping Station)	86.40	
Anderson Oil Company (engine oil and cylinder oil, Lawrence Ave. Pumping Station)	78.36	
United Asbestos & Packing Company (supplies, Lawrence Ave. Pumping Station)	72.51	
United Asbestos & Packing Company (supplies, Lawrence Ave. Pumpnig Station)	69.37	
Trumbull Waste Mfg. Company (cotton waste, Lawrence Ave. Pumping Station)	38.07	
Consumers Company (ice for cooling water, Lawrence Ave. Pumping Station)	24.00	
Geo. B. Carpenter & Co. (chain and repair links, Lawrence Ave. Pumping Station)	23.31	
Stebbins Hardware Company (tools, bolts and screws, Lawrence Ave. Pumping Station)	10.09	
Stebbins Hardware Company (tools and supplies, Lawrence Ave. Pumping Station)	7.87	
Kirby Motor Trucking Company (trucking tools, Lawrence Ave. Pumping Station)	6.00	
Hinckley & Schmitt (drinking water, Lawrence Ave. Pumping Station)	8.50	
H. M. Hooker Glass & Paint Company (painting supplies, Lawrence Ave. Pumping Station)	5.00	
Weil Bros. (supplies, Lawrence Ave. Pumping Station)	.52	
Bickett Coal & Coke Company (coal, 39th St. Pumping Station)	588.23	
The Babcock & Wilcox Company (repair parts, 39th St. Pumping Station)	491.95	
Kellogg-Mackay Company (pipe fittings, 39th St. Pumping Station)	330.99	
Kellogg-Mackay Company (pipe bands, 39th St. Pumping Station)	190.00	
Kenwood Trucking & Teaming Company (hauling cinders, 39th St. Pumping Station)	180.00	
H. M. Hooker Glass & Paint Company (supplies, 39th St. Pumping Station)	131.70	
Trumbull Waste Mfg. Company (white cotton waste, 39th St. Pumping Station)	128.67	
Buissono Bros. Mfg. Company (repairs, 39th St. Pumping Station)	63.73	
Wilbur J. Connell (paint, 39th St. Pumping Station)	15.75	
Parker's Towel Supply Company (towel service, 39th St. Pumping Station)	11.20	
Crane Company (supplies, 39th St. Pumping Station)	9.75	
Kirby Motor Trucking Company (motor truck service)	9.50	
Bissell Laundry (towel service)	1.52	
Weil Bros. (supplies)	.23	
The Thos. F. Ryan Company (lumber)	494.28	
The Thos. F. Ryan Company (lumber)	331.75	
Consolidated Company (cement)	331.25	
Consolidated Company (cement)	331.25	
Consolidated Company (cement)	306.08	
Consolidated Company (cement)	306.08	
Thornton-Claney Lumber Company (lumber)	321.54	
McGrath Sand & Gravel Company (sand and gravel)	304.54	
McGrath Sand & Gravel Company (sand and gravel)	238.18	
McGrath Sand & Gravel Company (sand)	58.02	
David G. Murray (teaming)	270.64	
Amounts carried forward	$ 8,323.89	$289,511.23

Amounts brought forward	$ 8,323.89	$289,511.23
David G. Murray (teaming)	191.04	
Buchanan-Daley Company (lumber)	247.80	
Gulick-Henderson Company (analysis and sampling coal)	154.50	
H. Stanley Hart (services of boat)	150.00	
Joseph Sandeen (teaming)	135.32	
H. M. Hooker Glass & Paint Company (paint supplies)	58.90	
Mears-Slayton Lumber Company (lagging)	56.16	
Barrett Hardware Company (repairs)	46.67	
Wm. O'Connell (hose)	35.00	
Wm. O'Connell (hardware supplies)	32.10	
Wm. O'Connell (hardware supplies)	27.05	
The Gould Mfg. Company (pump, valve, hose and pulley)	34.40	
Richard W. Becker (automobile services)	24.00	
J. W. Landis Mill Company (hardwood strips)	20.00	
Sweet-Wallach & Co. (graflex plates)	17.81	
Riddle & Wunderle Company (loose leaf books)	17.40	
Burr-Vack Company (memo books)	17.20	
Walter R. Paddock (professional services)	15.00	
Manning Garage (auto supplies)	10.75	
Stebbins Hardware Company (axe handles, stones, etc.)	3.22	
Manhattan Electrical Supply Company (dry cells)	9.36	
Fuller Morrison Company (chloroform)	6.66	
Dr. Wm. E. O'Neil (professional services)	6.00	
Stewart Ice Company (ice)	6.00	
H. Klahre (copper tubing and repairs)	5.00	
Conroy Boiler & Tank Works (repairs to cement gun)	5.20	
Barrett Hardware Company (rubber belt and alligator lace)	3.48	
John E. Burns Lumber Company (lumber)	1.79	
H. Channon Company (freight charges)	.52	
		9,652.22
I. and M. Canal and Illinois River Conditions Department.		
E. H. Heilbron (expenses of employes)	$ 206.07	
Couch & Heyle (best ash oars, etc.)	38.94	
Albert Hancock & Co. (desk files, etc.)	36.52	
W. H. Salisbury & Co. (boat cushions, etc.)	20.58	
Keuffel & Esser Company (cross section cloth)	10.20	
Sutliff & Case Company (standard plates)	8.03	
		320.34
Law Department.		
New Southern Garage (gasoline and storage)	$ 36.67	
L. F. King, Clerk (expenses of employe)	30.00	
Simplicity Wheel Company (demountable wheel and chain)	25.50	
New Southern Garage (gasoline, repairs and storage)	17.57	
The Fred J. Ringley Company (printing)	15.00	
Burr-Vack Company (onion skin paper)	10.50	
Callaghan & Co. (American Law Reports)	7.50	
Fred Klein Company (binding copies Lake and Gulf Waterways)	6.00	
Central Law Journal Company (subscription to Law Journal)	5.00	
Riddle & Wunderle Company (shorthand books)	1.50	
Geo. I. Jones (Digest-American and English Annotated Cases)	1.00	
		156.24
Clerical Department.		
Burr-Vack Company (loadstone binders)	$ 24.00	
Burr-Vack Company (paper fasteners, etc.)	8.30	
Amounts brought forward	$ 32.30	$299,640.03

Amounts carried forward	$ 32.30	$299,640.03
Burr-Vack Company (memo books, etc.)	7.16	
Albert Hancock Company (erasers, etc.)	6.70	
The Trumbull Safe & Vault Company (changing two combinations)	3.50	
Cameron-Amberg Company (cleaning dater)	1.75	
Cameron-Amberg Company (line stamps)	.80	
Albert Hancock & Co. (rubber stamps)	1.40	
Underwood Typewriter Company (adjusting machine)	.95	
		54.56
Police Department.		
L. F. King, Clerk (expenses of employes)		59.14
Real Estate Department.		
L. F. King, Clerk (vehicle license for Ford machine)	$ 10.00	
L. F. King, Clerk (amount paid Secretary of State, license for Ford machine)	1.50	
L. F. King, Clerk (amount paid Secretary of State, license for Ford machine)	1.50	
Bentley-Murray Company (voucher sheets)	35.00	
		48.00
General Account.		
L. F. King, Clerk (expenses incurred due to trip of Trustees investigating Lake Level controversy)	$ 300.92	
L. F. King, Clerk (expenses incurred due to trip of Trustees investigating Lake Level controversy)	15.00	
Evening American Publishing Company (advertising)	54.45	
John F. Higgins (express and cartage charges)	21.89	
Marshall Field & Co. (photographic supplies)	6.30	
Fred Klein Company (printing Proceedings)	5.00	
L. Gould & Co. (drinking cups)	3.75	
Standard Oil Company (labor and material)	3.60	
Alexander H. Revell & Co. (scrap basket, etc.)	3.45	
Standard Oil Company (replacing glass in office door)	3.43	
Standard Oil Company (connecting desk lamp)	1.16	
		418.95
Electrical Department.		
L. F. King, Clerk (semi-monthly payroll)	$ 18,463.23	
L. F. King, Clerk (expenses of employe)	37.85	
L. F. King, Clerk (expenses of Operating Engineer)	37.53	
L. F. King, Clerk (street car tickets)	7.00	
General Electric Company (lead covered cable)	4,752.61	
General Electric Company (lead covered cable)	2,203.25	
Exide Battery Depots (wood scps., plates, insulators, etc.)	924.53	
General Electric Company (lead covered cable)	721.87	
Western Electric Company (lead covered cable)	512.05	
Standard Underground Cable Company (weatherproof wire)	478.63	
Electric Service Supplies Company (insulators)	459.65	
Electric Service Supplies Company (insulators)	459.65	
Commercial Tire & Auto Company (non-skid cord casings)	384.44	
Chicago Telephone Company (telephone service)	369.87	
Commercial Tire & Auto Company (non-skid casings)	336.87	
Union Petrtoleum Company (gasoline)	316.05	
The Ohio Brass Company (porc. link strain ins.)	278.30	
Delta Star Electric Company (lightning arresters)	267.30	
American Supply Company (sanitary wipers)	119.77	
Baldrey & Buildhauser (diving services)	198.20	
Commonwealth Edison Company (aluminum arrester cones)	176.00	
Amounts carried forward	$ 31,504.65	$300,220.68

Amounts brought forward	$ 31,504.65	$300,220.68
The Fred J. Ringley Company (printing)	174.60	
Commonwealth Edison Company (complete control switches and current transformers)	158.03	
H. M. Hooker Glass & Paint Company (Japan dryer, etc.)	156.50	
H. Channon Company (repair parts for pump dredge)	155.96	
United Asbestos & Packing Company (twist drills)	142.91	
Bentley-Murray Company (printing)	133.70	
Chicago Steel Foundry Company (hinges, brackets and levers)	111.56	
Naugle Pole & Tie Company (cedar poles)	102.80	
Wilbur J. Connell (machine bolts and Turner torches)	96.37	
Milwaukee Air Power Pump Company (single cylinder pump pneumatic)	91.48	
Commercial Tire & Auto Company (outer casings)	89.40	
L. L. Fleig & Co. (red rope paper, etc.)	76.27	
H. M. Hooker Glass & Paint Company (pure turpentine, etc.)	76.18	
American Supply Company (sanitary wipers)	75.62	
The Wm. H. Reid Company (cylinder oil)	74.10	
Wilbur J. Connell (galvanized guy hooks, etc.)	61.13	
Sinclair Refining Company (oil)	92.69	
Thomas F. Plunkett (professional services)	42.00	
Garrett J. Cushing (personal injuries compensation)	52.00	
Vesta Accumulator Company (batteries)	57.09	
Consumers Company (ice)	56.75	
Belden Mfg. Company (cotton wire)	75.64	
The Lombard Governor Company (valve stems)	56.07	
Temme Triple Action Spring Company (rear springs)	55.20	
Hydrox Company (drinking water)	48.00	
Commonwealth Edison Company (wattmeters)	47.80	
Stebbins Hardware Company (Yale padlocks, etc.)	47.72	
The Wilson Rubber Company (rubber gloves)	44.00	
Monarch Electric & Wire Company (friction tape)	39.20	
Vacuum Oil Company (compressor oil)	36.04	
Aldine Press (printing)	35.70	
Commonwealth Edison Company (desk lamp and refillable fuses)	34.30	
Schweitzer & Conrad (fuses)	34.25	
Chicago Merchandise & Equipment Company (extinguisher fluid)	27.00	
Wm. Heggie (repairing large valve, etc.)	26.15	
Buissono Bros. Mfg. Company (stud bolts)	25.52	
The Texas Company (Familite oil and gasoline)	25.00	
Stebbins Hardware Company (brass machine screws, etc.)	24.55	
Western Electric Company (galvanized pulling irons)	24.00	
Fred Dushek (personal injuries compensation)	24.00	
National Lead Company (wire solder)	22.65	
The Wm. H. Reid Company (Creosote oil)	20.94	
The Lord & Bushnell Company (lumber)	20.80	
Beison Mfg. Company (wattmeters, covers, etc.)	19.88	
Steele-Wedeles Company (supplies, Robert "R" boat)	19.85	
Albert Hancock & Co. (office supplies)	19.82	
Chicago Feather Duster Company (fibre street brooms)	19.80	
Rex Rubber Tire Company (repairing tubes and tires)	18.50	
Standard Oil Company (gasoline and Polarine oil)	18.17	
Central Electric Company (knife switch)	18.00	
Monarch Electric & Wire Company (conduit bushings)	17.64	
Oxweld Acetylene Company (welding cylinder)	16.50	
Tungsten Mfg. Company (heavy duty Tungstens)	15.29	
The Garden City Sand Company (gravel and torpedo sand)	15.00	
Amounts carried forward	$ 34,574.77	$300,220.48

Amounts brought forward	$ 34,574.77	$300,220.68
Commonwealth Edison Company (knife blades, fuses)	14.58	
Geo. B. Carpenter & Co. (tarred marline)	14.58	
Samuel Harris & Co. (drill rod)	14.58	
Jos. H. Kirk Company (sugar barrels to pack insulators in)	14.40	
Green Engineering Company (gate files)	13.71	
Windle Garage (garage rental)	13.50	
A. C. Miller (gasoline)	12.65	
Monarch Electric & Wire Company (wire moulding)	12.25	
Schweitzer & Conrad (fuses)	12.17	
A. C. Miller (gasoline)	11.50	
Air Reduction Sales Company (lumber)	10.20	
The Bristol Company (repairing recording meter)	10.17	
S. Deschauer Company (galvanized pipe, etc.)	10.05	
Joliet Wrought Washer Company (washers)	10.00	
Drs. Hammond and Hoffman, M. D. (professional services)	10.00	
Air Reduction Sales Company (brass and copper tips)	9.50	
Farrell, Kemp & Gushe Company (pipe with lugs)	9.00	
The Electric Auto Lite Service Station (overhauling generator)	8.50	
J. F. Bowan & Co. (switch for Overland machine)	8.15	
Shavings & Sawdust Company (sawdust)	6.50	
The White Company (Giant reflex porcelains)	6.39	
Belden Mfg. Company (wire)	6.27	
City of Chicago, City Collector (inspection charges)	6.00	
Southwest Printing Company (printing)	6.00	
R. Hanisch Sons Company (Burgen batteries)	5.60	
United Asbestos & Packing Company (graphite flax packing)	5.47	
Monarch Electric & Wire Company (conduit)	5.29	
David G. Murray (teaming)	5.00	
Cling-Surface Company (belt filler)	4.90	
Iceless Icebox Company (coolers)	4.55	
Buckley & Buckley (typewriter ribbons)	4.50	
Parker's Towel Supply Company (towel service)	4.50	
United States Crushed Stone Company (telephone service)	4.00	
Fuller-Morrison Company (glycerine, etc.)	3.55	
Chas. Novak & Son (plate for windshield)	3.18	
City of Chicago, City Collector (inspection charges)	2.51	
United Asbestos & Packing Company (belt hooks)	2.30	
Addressograph Company (complete addresses)	2.06	
Overland Motor Company (washers)	1.61	
The Standard Motor Construction Company (tips, ignitor)	1.56	
American Blue Print Paper Company (blue prints)	1.21	
Underwood Typewriter Company (adjusting machine)	1.05	
Addressograph Company (plates and cards)	.87	
Burr-Vack Company (lint stamp)	.20	
Windle Garage (storage charges)	13.50	
		34,902.83

Miscellaneous Accounts.

L. F. King, Clerk (payroll repairs to walls, Main Channel and North Shore Channel bridges)—			
Construction Account	$1,315.19		
Maintenance and Operation Account	5,576.42		
Electrical Department	553.00		
		$ 7,444.61	
Amounts carried forward		$ 7,444.61	$335,123.51

Amounts brought forward		$ 7,444.61	$335,123.51
L. F. King, Clerk (expenses of employe)—			
Maintenance and Operation Account	$ 14.55		
Electrical Department	4.65		
		19.20	
American Blue Print Paper Co. (blue prints)—			
Construction Account	$ 134.97		
Maintenance and Operation Account	37.26		
Law Department	11.77		
General Account	3.94		
Real Estate Department	5.11		
		193.05	
Mosior Garage (automobile services)—			
Maintenance and Operation Account	$ 42.00		
Clerical Department	6.00		
Electrical Department	80.00		
		128.00	
Sweet-Wallach & Co. (photographic supplies)—			
Maintenance and Operation Account	$ 4.80		
Law Department	22.20		
		27.00	
L. F. King, Clerk (special roll, 39th St.)—			
Maintenance and Operation Account	$ 105.00		
Electrical Department	105.00		
		210.00	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 7.64		
Maintenance and Operation Account	53.01		
		60.65	
Chicago Telephone Co. (telephone service)—			
Construction Account	$ 50.88		
Maintenance and Operation Account	11.72		
		62.60	
The Frederick Post Co. (blue prints)—			
Construction Account	$ 176.39		
Maintenance and Operation Account	6.52		
Law Department	49.98		
		232.89	
			8,378.00
Grand Total			$343,501.51

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
GEORGE W. PAULLIN,
Committee on Finance.

Mr. Lawley moved that the report be adopted and that the vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel (except as to voucher in favor of the T. J. Forschner Contracting Co., for work done on the Calumet Sewage Pumping Station for $126,750.92, on which Mr. Sergel voted *"Nay"*), Carr, Clark, Healy, Lawley, Littler, Mueller, Nance (except as to voucher in favor of the T. J. Forschner Contracting Co., for work done on the Calumet Sewage Pumping Station for $126,750.92, on which Mr. Nance voted *"Nay"*) and Paullin—Seven on all

vouchers, and Nine on all vouchers with the exceptions above noted.

Nays—None (except as above shown).

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on August 1, 1918 (page 802 of the Proceedings) Patrick A. Nash and Richard J. Nash, co-partners doing business under the name and style of Nash Bros., entered into a contract with the Sanitary District for the construction of the Des Plaines River Intercepting Sewer, Contract No. 1.

Your Committee further reports that it has received a communication from the Acting Chief Engineer in which he states that it is desirable to make a slight change in the line of said sewer in order to avoid damaging some valuable trees, which change will necessitate moving and replacing an existing public toilet, and he requests that he be authorized to order said contractors to perform said work as an extra under the "Extra Work" clause of said contract, at an estimated cost of $300.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to order Patrick A. Nash and Richard J. Nash, co-partners doing business under the name and style of Nash Bros., to perform the work above specified, provided the cost thereof shall not exceed the sum of $300.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Acting Chief Engineer in which he states that the plans for the Calumet Sewage Pumping Station show a roadway on 125th street graded on a gradual slope down to the ground surface near the east side of said station; that the building itself as finally located is quite a distance west of the east line of the lot and the entrance to the building is near and fronts on 125th street. He further states that it is advisable to change the grade of said roadway and to cut down a manhole to conform to said new grade and he requests that he be authorized to order the T. J. Forschner Contracting Company to perform said work under the extra work clause of its contract at a cost of not to exceed $250.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to order the T. J. Forschner Contracting Company to perform the work above specified under the extra work clause of

said contract, provided the cost of the same shall not exceed the sum of $250.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that it is necessary to rebuild two of the eight-inch centrifugal pumps at the 39th street pumping station; that he has obtained two informal bids for doing said work the lowest of which is that of the Fitzgerald Boiler Works in the sum of $250.00 for each pump, and the Chief Engineer recommends that the offer of said Company be accepted to the extent of rebuilding one of said pumps and if said work is acceptable that their offer to repair the other pump for the same price be then accepted.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby authorized and directed to accept the bid of the Fitzgerald Boiler Works to perform the work of rebuilding said pumps above specified on the basis stated, provided the total cost of same shall not exceed the sum of $250.00 for each pump.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that on August 8, 1918 (page 892 of the Proceedings) the T. J. Forschner Contracting Company entered into a contract with the Sanitary District for constructing the Calumet Sewage Pumping Station and furnishing and installing certain electrical equipment therein.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he states that it is advisable to make certain changes in the specifications for the switchboard layout and in some instances to increase the size of certain conduits and cables and in other instances to decrease said sizes at a net increased cost of $970.00 and he requests that he be authorized to order said Contractor to perform said work under the extra work clause of its said contract.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby, authorized and directed to order the T. J. Forschner Contracting Company to perform the work above specified under the extra work clause of its said contract, provided the cost thereof shall not exceed the sum of $970.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanynig order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering to which were referred at the meeting of September 18, 1919 (page 1180 of the Proceedings), bids for the construction of the North Shore Channel Highway, having considered all the proposals presented and the qualifications of each bidder, together with the report submitted by the Chief Engineer, is of the opinion that all bids for doing said work should be rejected for the reason that the same are excessive.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That all bids received for the construction of the North Shore Channel Highway be, and the same are hereby, rejected for the reason stated, and it is further,

Ordered, That the checks of the respective bidders for said work be returned to said bidders.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on September 26, 1918 (page 1081 of the Proceedings) authorized the Chief Engineer to dismantle the Sewage Testing Station at the Union Stock Yards, salvage the material and apparatus contained therein and erect an activated sludge testing station on a smaller scale, at the outlet of one of the large tanneries situated on the north branch of the Chicago River at a cost of not to exceed $5,000.00.

Your Committee further reports that it has received a communication from the Chief Engineer in which he states that at the time he made his estimate for said work he based it upon the

existing prices of labor and material, that since said time the cost of said work has largely increased due to an advance in the prices of labor and material and also due to the fact that the old material has deteriorated to such an extent that new material must be used and he requests authority to expend an additional sum of $8,500.00 in completing said testing station.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized to expend the sum of $8,500.00 in addition to the sum of $5,000.00 authorized to be expended as above specified, in completing the work of installing said activated sludge testing station on the north branch of the Chicago River.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Engineering reports that the Board on September 18, 1919 (page 1179 of the Proceedings) authorized the Electrical Engineer to prepare plans and specifications for the purchase of certain power and distribution transformers and present the same when prepared to your Committee for its approval.

Your Committee further reports that it has considered plans and specifications for said transformers prepared by the Electrical Engineer, and approved the same and recommends the passage of the following order:

Ordered, That the plans and specifications prepared by the Electrical Engineer for purchasing the transformers above specified be, and the same are hereby approved, and it is further

Ordered, That the Clerk be, and he is hereby, authorized and directed to advertise for bids for the purchase of said transformers in accordance with the plans and specifications so prepared by the Electrical Engineer.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Real Estate Development.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Real-Estate Development reports that it has received a communication from the

Manager of the Real-Estate Department in which he states that the pamphlet entitled "Manufacturing sites along the Chicago Sanitary and Ship Canal," which was issued in 1916, should be revised in order to furnish the public the latest information relative to said sites.

He further states that he has procured estimates for printing and binding 2,000 copies of a revised edition of said pamphlet which can be procured for the sum of $500.00.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Manager of the Real-Estate Department be, and he is hereby, authorized to have 2,000 copies of said pamphlet printed, provided the cost thereof shall not exceed the sum of $500.00.

Respectfully submitted,

PATRICK J. CARR,
Chairman.
MATT. A. MUELLER,
WM. J. HEALY,
Committee on Real-Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

Employment

Mr. Paullin presented the following report from the Committee on Employment:

CHICAGO, October 2, 1919.

To the Honorable, the President and Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Employment herewith transmits the following report of actions taken:

NEW APPOINTMENTS.

Provided for in 1919 Budget.

Electrical Department—

C. M. Whitman, Draftsman, $160.00 per month.

John Hunley, Laborer, 50 cents per hour.

INCREASES.

Engineering Department—

John Boe, Carpenter, from 70c per hour to 80c per hour.

Horace Murray, Carpenter, from 60c per hour to 70c per hour.

E. Boe, Carpenter, from 60c per hour to 70c per hour.

Harry Lindquist, Carpenter, from 60c per hour to 70c per hour.

H. A. Doud, Carpenter helper, from 50c per hour to 60c per hour.

Chas. Heins, Carpenter Helper, from 50c per hour to 60c per hour.

Chas. Matjesk, Carpenter Helper, from 50c per hour to 60c per hour.

DROPPED FROM SERVICE.

Electrical Department—

Andrew F. Ryder, Operator (vacation employee) $125.00 per month.

Respectfully submitted,

GEORGE W. PAULLIN,
Chairman.
H. E. LITTLER,
MATT. A. MUELLER,
JAS. H. LAWLEY,
Committee on Employment.

Mr. Paullin moved that the report be received, approved and placed on file.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler, Mueller and Paullin—Seven.

Nays—None.

Passed and not voting—Messrs. Sergel and Nance—Two.

PETITIONS AND COMMUNICATIONS.

The Clerk presented a communication from Col. Robt. McCormick, dated September 20, 1919, which was ordered published and filed as follows:

THE CHICAGO TRIBUNE
THE WORLD'S GREATEST NEWSPAPER

CHICAGO, September 20, 1919

Board of Trustees Sanitary District, 900 South Michigan Avenue, Chicago.

DEAR SIRS—I write to thank you heartily for the great compliment you paid me in naming the new road along the north shore channel after me.

The Sanitary District was the first work upon which I engaged and has always been closer to me than my private interests.

It will be a great pleasure to you to realize that during your period of office you are going to see the consummation of all the great projects; the Calumet canal, the disposal of sewage and the Deep Waterway.

Very truly yours

(Signed) ROBERT R. MCCORMICK.

The Clerk presented a communication from Wm. G. Keith Commissioner, Department of Gas and Electricity of the City of Chicago, in which he stated that $60,000.00 for the painting of electric light poles and equipment belonging to the City is inadequate for the purpose of painting all of said poles; that he is of the opinion that the poles should have a second coat to prevent against rusting and requesting the Sanitary District to set aside a sum of money sufficient to cover the painting of the remainder of the poles and to give all of said poles a second coat of paint.

Referred to the Committee on Engineering.

MISCELLANEOUS AND NEW BUSINESS.

Trustee Clark moved that the bids received by the Clerk for furnishing cement be returned to the various bidders without being opened, due to the fact that the Board has rejected the bid for the building of the Highway.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller, Nance and Paullin—Nine.

Nays—None.

ADJOURNMENT.

Trustee Lawley moved that when the Board adjourn that it adjourn to meet on Thursday, October 16, 1919.

The motion prevailed.

Trustee Lawley moved that the Board do now adjourn.

The motion prevailed.

L. E. King.

Clerk.

628.09773
C 43s

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF

THE SANITARY DISTRICT OF CHICAGO.

REGULAR MEETING

THURSDAY, OCTOBER 16, 1919, 2 O'CLOCK P. M.

OFFICIAL RECORD.

Published by Authority of the Board of Trustees of The Sanitary District of Chicago.

President Sergel presiding, the roll being called, there were

Present—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Absent—Mr. Paullin—One.

Bids.

The Clerk opened and read the bids received for Power Transformers and Distribution Transformers as shown on schedule appearing on page 1242-A of the Proceedings.

Mr. Littler moved that the Bids be referred to the Electrical Engineer for tabulation and to the Committe on Engineering for report.

The motion prevailed.

The Clerk opened and read the bids received for the Des Plaines River Sewage Treatment Works, as shown on schedule appearing on page 1242-A of the Proceedings.

Mr. Clark moved that the Bids be referred to the Chief Engineer for tabulation and to the Committee on Engineering for report.

The motion prevailed.

Mr. Clark moved to suspend the regular order of business and take up for consideration the report of the Special Committee on Lake Levels.

REPORTS OF COMMITTEES.

Mr. Clark presented the following report from the Committee on Settlement of Lake Level Controversy and Litigation with the United States concerning the withdrawal and diversion of water from Lake Michigan.

CHICAGO, October 16, 1919.

To the Honorable, the President and Members of the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your special committee, on settlement of lake level controversy and litigation with the United States, concerning the withdrawal and diversion of water from Lake Michigan, begs to make the following report:

1. On January 5th, 1918, pursuant to previous extensive investigation and consideration, the Board of Trustees of The Sanitary District of Chicago passed an ordinance offering to compromise the litigation, now pending between the United States and the Sanitary District, with reference to the diversion of water from Lake Michigan, at Chicago, and the controversies involving claimed injury to navigation, due to supposed lowering of the levels of certain of the Great Lakes—Michigan, Huron, Erie and Ontario and connecting waters. Generally, the proposed settlement contemplated the defraying, by the Sanitary District, of the expense of constructing submerged dams or weirs, called compensating works, in the St. Clair and Niagara Rivers. These compensating works had, theretofore, been recommended in the report, called "Final Report—Waterway from Lockport, Illinois, to the Mouth of the Illinois River"—63rd Congress, 2nd Session, H. R. Document No. 762 and the works were designed, when built, to contract the flowage capacity of said rivers and they would, according to their purpose, cause the surface elevations of lakes, Michigan, Huron and Erie, to assume and remain at the levels that the lakes would have been, or would be, if the diversion from Lake Michigan of ten thousand cubic feet of water per second at Chicago had not or should not have existed. As a condition of the Sanitary District's defraying the expense of these works, it was proposed that Congress, or some other proper authority of the United States, fix the diversion from Lake Michigan at Chicago at not less than ten thousand cubic feet of water per second. Pursuant to the proposal made, in the Ordinance mentioned, there was introduced in Congress, by Congressman Gallagher of Illinois, on or about January 29th, 1918, a bill providing for the construction of said compensating works, and also authorizing the withdrawal of water mentioned on condition that the Sanitary District defray the expense of constructing the compensating works, above described. The Bill was referred to the House Committee on Rivers and Harbors and, by that Committee, the Bill was referred to the Secretary of War and Chief of Engineers, U. S. A., for their consideration and recommendation. The Chief of Engineers, shortly thereafter, and on or about the 15th day of February, 1918, advised the said House Committee that he could not recommend the passage of the Bill, due to the objections interposed by Canada, by which objections it was claimed by the Canadian authorities that the diversion at Chicago injured navigation in the lower St. Lawrence River at Montreal, and from Montreal to the Gulf of the St. Lawrence.

2. Accordingly, George M. Wisner, the chief engineer, and the attorney for the District, conferred with Canadian authorities in regard to Canadian ob-

S

Division B,

ution Transformers

No. of Bids	Name and Address of I	Primary Volts	Price Each	Price Total
1	Pittsburgh Transformer C	12,000	$625.70	.....
		2,300	502.00	.....
		6,600	389.75	.....
2	Westinghouse Electrical &	12,000	657.85	
		2,300	497.32	.....
		6,600	409.44	.....
				.....
3	General Electric Co.....	12,000	693.00	.....
		2,300	563.00	.....
		6,600	430.00	.....

THE SANITARY DISTRICT OF CHICAGO.—ELECTRICAL DEPARTMENT

PROPOSALS RECEIVED FOR POWER TRANSFORMERS AND DISTRIBUTION TRANSFORMERS

CHICAGO, ILL., OCTOBER 16, 1919

No. of Bids	Name and Address of Bidders	Division A, Power Transformers					Division B, Distribution Transformers				
		Quantity	Size K.V.A.	Primary Volts	Price Each	Price Total	Quantity	Size K.V.A.	Primary Volts	Price Each	Price Total
1	Pittsburgh Transformer Co.....	3	500	12,000	$1,446.00	.....	3	100	12,000	$625.70	.....
							15	100	2,300	502.00	.....
							3	50	6,600	389.75	.....
2	Westinghouse Electrical & Mfg. Co....	3	500	12,000	1,650.00	.....	3	100	12,000	657.85	
							15	100	2,300	497.32	.....
							3	50	6,600	409.44	.....
											.....
3	General Electric Co.....	3	500	12,000	1,648.00	.....	3	100	12,000	693.00	.....
							15	100	2,300	563.00	.....
							3	50	6,600	430.00	.....

		Div. K Steam Heating	Div. L Plumbing & Gas Fitting	Total	
1	H. W. J	.....	.....	Bid incomplete. Not signed. Intended for roofing. $920 given in letter.	
2	Kohlbry	$14,688.00 No Bid*	.....	.....	.....
3	Zander	.....	.....	.....	.....
4	M. W.	.....	.....	.....	.....
5	Louis S	.....	.....	.....	.....
6	Matt Su	.....	.....	.....	.....
7	W. J. W	13,106.00 500.00*	.....	.....	.....
8	E. J. M	12,581.00 155.00*	.....	.....	.....
9	J. Bobb	.....	.....	.....	.....
10	Willian	14,075.00 495.00*	.....	.....	.....
11	Thomas	.....	.....	.....	.....
12	Jas. A.	.....	.....	.....	.....
13	Edw. P	.....	.....	.....	.....
14	Arthur	11,809.00 $6 per unit*	.....	.....	.....
15	A. Kila	11,830.00 No Bid*	.....	.....	.....
16	Hawes	.....	.....	.....	.....
17	Glennor	14,198.00 145.00*	.....	.....	.....
18	Gallahe	13,964.00 450.00*	.....	.....	.....
19	Murphy	.....	$10,723.00	.....	.....
20	W. J. G	13,730.00 $6 per unit*	.....	.....	.....
21	Jos. B.	.....	.....	.....	.....
22	J. C. M	.....	.....	.....	.....
23	Robert	13,153.00 150.00*	.....	.....	.....
24	Lennox	.....	.....	.....	.....
25	Leyden	14,500.00 500.00*	.....	$93,660.00	Separately & Entirety
26	Carl Jo	.....	7,300.00	.....	.....
27	S. N. N	.....	.....	77,742.00	Entirety
28	Schillin	.....	.....	.....	.....
29	Ralph F	.....	.....	.....	.....

*Bid for Temporary Heat

THE SANITARY DISTRICT OF CHICAGO

TABULATION OF BIDS RECEIVED FOR DESPLAINES RIVER SEWAGE TREATMENT WORKS

DIVISIONS B, D, E, F, G, H, I, J, K, AND L

OCTOBER 16, 1919

	Bidder	Div. B Mason Work	Div. D Orn. Iron, Etc.	Div. E Sheet Metal Work	Div. F Marble & Floor Tile	Div. G Roofing	Div. H Lathing & Plastering	Div. I Carpentry & Millwork	Div. J Painting & Varnishing	Div. K Steam Heating	Div. L Plumbing & Gas Fitting	Total	
1	H. W. Johns-Manville Co.	.....	.....	$ 1,203.00	.....	.....	.....	.....	.....	.....	.....	Bid incomplete. Not signed. Intended for roofing. $920 given in letter.	
2	Kohlbry-Howlett Co.	.....	.....	.....	.....	.....	.....	.....	.....	$14,688.00 No Bid*	.....	.....	.....
3	Zander Reum Co.	.....	.....	.....	.....	.....	$ 998.00	.....	.....	.....	.....	.....	.....
4	M. W. Powell Co.	.....	.....	.....	.....	$ 852.00	.....	.....	.....	.....	.....	.....	.....
5	Louis S. Rysdon Co.	.....	.....	2,010.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Matt Suerth	.....	.....	.....	.....	.....	.....	.....	$ 3,473.00	.....	.....	.....	.....
7	W. J. Walsh Co.	.....	.....	.....	.....	.....	.....	.....	.....	13,106.00 500.00*	.....	.....	.....
8	E. J. McDonough & Co.	.....	.....	.....	.....	.....	.....	.....	.....	12,581.00 155.00*	.....	.....	.....
9	J. Bobbe & Co.	.....	.....	.....	.....	.....	.....	.....	1,800.00	.....	.....	.....	.....
10	William Klender & Co.	.....	.....	.....	.....	.....	.....	.....	.....	14,075.00 495.00*	.....	.....	.....
11	Thomas Kelly	.....	.....	.....	.....	.....	.....	$ 3,075.00	.....	.....	.....	.....	.....
12	Jas. A. Miller & Bro.	.....	.....	989.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Edw. Pickens Co.	.....	.....	.....	$ 3,490.00	.....	.....	.....	.....	.....	.....	.....	.....
14	Arthur F. Walsh	.....	.....	.....	.....	.....	.....	.....	.....	11,809.00 $6 per unit*	.....	.....	.....
15	A. Kilander & Co.	.....	.....	.....	.....	.....	.....	.....	.....	11,830.00 No Bid*	.....	.....	.....
16	Hawes & Dodd	.....	.....	.....	3,985.00	.....	.....	.....	.....	.....	.....	.....	.....
17	Glennon Bielke Co.	.....	.....	.....	.....	.....	.....	.....	.....	11,198.00 145.00*	.....	.....	.....
18	Gallaher & Speck	.....	.....	.....	.....	.....	.....	.....	.....	13,961.00 450.00*	.....	.....	.....
19	Murphy Plumbing Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	$10,723.00	.....	.....
20	W. J. Gemeny Co.	.....	.....	.....	.....	.....	.....	.....	.....	13,730.00 $6 per unit*	.....	.....	.....
21	Jos. B. Casey	$77,696.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	J. C. MacFarland & Co.	.....	.....	1,820.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	Robert Gordon, Inc.	.....	.....	.....	.....	.....	.....	.....	.....	13,153.00 150.00*	.....	.....	.....
24	Lennox-Haldeman Co.	.....	.....	.....	.....	.....	1,495.00	.....	.....	.....	.....	.....	.....
25	Leyden Ortseifen Co.	46,500.00	$14,600.00	1,260.00	3,900.00	900.00	800.00	800.00	2,700.00	14,500.00 500.00*	.....	$93,660.00	Separately & Entirety
26	Carl John Stein Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,300.00	.....	.....
27	S. N. Nielsen	53,051.00	12,130.00	1,300.00	3,636.00	1,200.00	995.00	3,805.00	1,625.00	.....	.....	77,742.00	Entirety
28	Schillinger Construction Co.	46,996.00	.....	.....	.....	.....	.....	3,900.00	.....	.....	.....	.....	.....
29	Ralph H. Simpson Co.	.....	13,295.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Bid for Temporary Heat

jections and possible means of obviating same. Mr. Wisner, chief engineer of the Sanitary District, in conference with various Canadian officials, suggested so regulating the outflow of Lake Ontario that a greater amount of water could be delivered to the lower St. Lawrence river at Montreal, during certain months—September, October and November—of the year, when navigation there required it. This suggestion received the tentative approval of Canadian authorities. Negotiations have been had with the Chief Engineer's office U. S. A., and the engineer at Chicago; the whole question has been studied, and for such purposes and investigation Mr. Francis C. Shenehon, an eminent hydraulic engineer, particularly familiar with the hydraulics of the Great Lakes, was employed to work out a plan for the regulation of the various Lakes, controlling their levels and compensating for any claimed lowering, due to the diversion at Chicago. Mr. Wisner, chief engineer of the Sanitary District on January 15th, 1918, by letter, in a preliminary way, outlined the position of the Sanitary District. in regard to this compromise. General William M. Black, chief of engineers, U. S. A., has visited and inspected the works of the Sanitary District. Your Committee has received and considered the plans and reports made by Mr. Shenehon for the regulation of Lake Erie by the construction of certain movable dams in the Niagara River, below the city of Buffalo, New York, which regulating works, to be constructed in the Niagara River, will immensely benefit navigation upon lakes Michigan, Huron, Erie, and connecting waters and water power at Niagara Falls and off-set for any lowering of the levels of lakes Huron, Michigan, and Erie, due to Chicago's diversion of ten thousand cubic feet per second. Your Committee has also received and considered the report of Mr. Shenehon with reference to the regulation of the outflow of Lake Ontario by constructing certain works, of a movable character, in the St. Lawrence River near Ogdensburg, New York. The works, to be constructed in the St. Lawrence River will regulate the level of Lake Ontario, benefit water power on the St. Lawrence River, by making the flow more even, and will remove any claimed damage to the St. Lawrence River at Montreal and below. Your Committee and certain of the Trustees of The Sanitary District of Chicago have recently visited the sites of the proposed works, in the Niagara River at Buffalo and in the St. Lawrence River at Ogdensburg.

3. The Committee is of the opinion that the plan proposed for the settlement of controversies relating to the amount of diversion from Lake Michigan, at Chicago, should be compromised and settled and that, by agreement between the United States and the Sanitary District, the permanent diversion should be fixed, and that such diversion should not be less than ten thousand cubic feet of water per second, to properly take care of Chicago's sanitary needs and to protect health and preserve life, insuring to the people of Chicago an unpolluted water supply from Lake Michigan. Your Committee is further of the opinion that the Board of Trustees of the Sanitary District should offer, in compromise, to defray the expense of constructing the works proposed by the report of Mr. Shenehon to be constructed in the Niagara River, to regulate and control the levels of Lakes Michigan, Huron and Erie, and connecting waters; the works, however, to be constructed by the United States with the funds so provided by the Sanitary District, and thereafter to be maintained by the United States at its own expense; further, the Sanitary District should agree that such works as planned by Mr. Shenehon, will, when constructed and operated, perform the functions and purposes for which they are to be pro-

vided. Your Committee is further of the opinion, that, so far as Canada is concerned, her claim with reference to injury, due to a diversion of ten thousand cubic feet per second at Chicago, was fully considered, disposed of and met by the treaty of January 11, 1909, between the United States and Great Britain, relating to boundary waters between the United States and Canada. However, it may be that the regulation of Lake Erie, by means of the works in the Niagara River, will require some regulation of the levels of Lake Ontario, in the manner proposed by Mr. Shenehon, in the opinion of the authorities of the United States Government, who may consider and pass upon these matters; and such authorities of the United States Government may not agree with the construction placed upon said treaty, by the Sanitary District, and may feel that Canadian objections are not entirely baseless. If such conditions arise, it is the recommendation of your Committee that the Sanitary District also offer to defray the expense of constructing regulating works in the St. Lawrence River, as recommended by the report of Mr. Shenehon, above mentioned.

The Sanitary District has employed, as special counsel in this matter, the former attorney of the District who carried on the litigation in behalf of the Sanitary District between it and the United States regarding the right of the Sanitary District of Chicago to divert water from Lake Michigan for its sanitary needs, to protect health and preserve life, and said special counsel has prepared a brief, in conjunction with the District's attorney, Mr. Shenehon and Mr. Wisner, the chief engineer of the Sanitary District, setting forth the proposal of the Sanitary District to compromise the litigation mentioned, and the reasons and arguments in support of the Sanitary District's position.

While your Committee is of the opinion that the position taken by the Sanitary District, in the litigation mentioned, regarding the diversion of water at Chicago, is sound and correct and should be sustained by the courts, nevertheless, in view of the fact that your Committee believes that controversies between Federal and State authorities should, if possible, be eliminated, and also of the fact that it would be of great benefit to both United States and the people of the Sanitary District if this controversy were finally settled, and considering the danger and menace to the health and lives of the people living within the limits of the Sanitary District, if the United States should be successful in the litigation, and having in mind, also under such conditions that upwards of a two hundred million dollar burden would be cast upon the people of the Sanitary District to initiate, install and operate an entirely different system, for the disposition and elimination of sewage and drainage, your Committee, having considered the matter, and the chief engineer of the Sanitary District, its attorney and said special counsel, having recommended the settlement on the basis outlined, recommends the passage of the following order:

Ordered, That the foregoing report of your Committee is hereby adopted by the Board of Trustees of the Sanitary District, and it is further

Ordered, That the Chief engineer, the attorney of the Sanitary District and said special counsel be, and they are hereby, authorized to procure the printing of the brief, above mentioned, setting forth the proposal of the Sanitary District, as above outlined, for the settlement of the controversy with the United States, regarding the amount of the diversion of water at Chicago, and that said chief engineer, attorney and special counsel have printed such number of said briefs as, in their opinion, is necessary and, after the same is printed, they

are authorized to present the same to the Secretary of War and Chief of Engineers of the United States Army and to such other authorities of the United States as may, in their opinion, be necessary, feasible and proper.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.

WM. J. HEALY,
PATRICK J. CARR,

Special Committee on Lake Level Controversy.

Approved as to form:

C. ARCH WILLIAMS,
Attorney,

EDMOND D. ADCOCK,
Counsel.

Mr. Clark moved that the report be adopted and the accompanying orders passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

REPORTS OF OFFICERS.

The Clerk presented his report of purchases made for and on behalf of the Sanitary District from June 30, 1919 to August 29, 1919, both inclusive, which was ordered placed on file.

The Clerk presented his report of money received and deposited with the Treasurer during the month of September, 1919, together with the receipt of the Treasurer therefor, which were ordered published and filed as follows:

CHICAGO, October 16, 1919.

To the Honorable, the President and the Board of Trustees of The Sanitary District of Chicago.

GENTLEMEN—I beg to report the receipt of seven hundred eighty-nine thousand two hundred sixty-four and five hundredths ($789,264.05) dollars during the month of September, 1919, from the following sources:

Harry R. Gibbons, County Collector, account 1918 taxes		$700,000.00
A. Guthrie & Co., in payment of the following invoices for cement furnished them:		
July 29th, 1919	$ 1,295.75	
September 11th, 1919	1,658.88	
		2,954.63
Law Department, the following payroll checks deposited to the credit of The Sanitary District of Chicago on account of the amounts being unearned:		
Payroll check No. 42, Ross C. Hall	$ 291.66	
Payroll check No. 780, Ross C. Hall	291.66	
		583.32
United States Crushed Stone Company, in payment of judgment note due September 2, 1919		333.33
Sangamon County Mining Company, deposit of warrant No. 102209 dated August 7, 1919, payable to the Sangamon County Mining Company, in payment of voucher of same number covering coal shipped to the Lawrence Ave. Pumping Station. The warrant was refused		
Amount carried forward		$703,871.28

Amount brought forward		$703,871.28
by said company on account of their not making arrangements to deliver coal upon a B.T.U. basis, their bid on this basis having been rejected on September 2, 1919		239.44
L. F. King, Clerk, being refund of amount overpaid to Joseph E. Smith, boiler washer, on 39th St. Pumping Station roll		56.45
L. F. King, Clerk, being refund of amount overpaid to W. L. Clarke, rodman		6.67
Wm. T. Lynch, Record Clerk, being amount from sundry persons for personal telephone calls		2.05
Coal Products Manufacturing Company, in payment of rental for tract of land in Will County leased to the Western United Gas & Electric Company for period covering July 1, 1919, to December 31, 1919, inclusive		1,673.50
L. I. Conrad, being annual rental from September 1, 1919, to August 31, 1920, for lots 121-123-125-127-129-131 and 133, containing 105.28 acres more or less		263.00
Great Lakes Dredge & Dock Company, for annual rental of land leased to the Western Quarries Company, covering period February 1, 1919, to January 31, 1920		113.20
Coal Products Manufacturing Company, in payment of rental for strip of land in Will County, leased to the Western Gas & Electric Company for period covering July 1, 1919, to December 31, 1920, inclusive		110.00
Van Fleet Shops, being monthly rental for month of February, 1919, for premises located at No. 1 Jefferson St., Joliet, Ill.		75.00
J. A. Budlong, being amount received from right of way along the North Shore Channel		64.80
Frank Bouda, being annual rental from July 17, 1919, to July 16, 1920, for seven acres of land in tract No. 117 along Main Channel		35.00
Gus Blazing, being annual rental from July 1, 1919, to June 30, 1920, for lot 223, containing approximately 25.80 acres		25.00
P. C. Haley, being refund in case of Henry Offerman vs. Sanitary District, the case being dismissed at plaintiff's costs on March 25, 1916		1.00
Sundry consumers, for electric power and light	$ 52,399.48	
City of Chicago—		
For power and light for months of June and July, 1919	$ 15,695.56	
For interest and depreciation for months of June and July, 1919	82.36	
	15,777.92	
South Park Commissioners, for power and light for month of July, 1919	4,007.46	
Commissioners of Lincoln Park—		
For power and light for month of July, 1919	$ 1,916.23	
For interest and depreciation for month of July, 1919	69.46	
	1,985.69	
Amount carried forward		$706,536.39

Amount brought forward		$706,536.39
West Chicago Park Commissioners—		
For power and light for month of June, 1919	$ 1,266.48	
For interest and depreciation for month of June, 1919	112.14	
		1,378.62
State of Illinois, for power and light for months of June, July and August, 1919		1,001.00
Village of South Holland—		
For power and light for months of February, June, July and August, 1919	$ 796.96	
For interest and depreciation for months of February, June, July and August, 1919	65.07	
		862.03
Village of Dolton—		
For power and light for month of July, 1919	$ 604.78	
For interest and depreciation for month of July, 1919	18.65	
		623.43
Village of Maywood—		
For power and light for month of July, 1919	$ 514.22	
For interest and depreciation for month of July, 1919	44.65	
		558.87
Town of Cicero, for power and light for month of July, 1919		499.80
Village of Melrose Park—		
For power and light for month of July, 1919	$ 392.06	
For interest and depreciation for month of July, 1919	59.46	
		451.52
Village of Evergreen Park—		
For power and light for months of July and August, 1919	$ 366.38	
For interest and depreciation for months of July and August, 1919	53.74	
		420.12
Village of Summit—		
For power and light for month of July, 1919	$ 337.67	
For interest and depreciation for month of July, 1919	32.98	
		370.65
City of Berwyn—		
For power and light for month of July, 1919	$ 156.95	
For interest and depreciation for month of July, 1919	15.00	
		171.95
Amount carried forward		$706,536.39

Amount brought forward		$706,536.39
Ciyt of Blue Island—		
For power and light for months of June and July, 1919	$ 76.92	
For interest and depreciation for months of June and July, 1919	90.78	
	167.70	
Village of Lyons, for power and light, on account	150.00	
Village of Wilmette, for power and light for month of July, 1919	127.87	
War Community Service, for power and light for month of August, 1919	66.60	
Village of Wilmette, for power and light for month of July, 1919	16.97	
Village of Stickney, for power and light for month of July, 1919	9.57	
Clapp, Norstrum & Riley, to cover cost of extending circuit south in Coleman avenue, from 28th street, replacing transformers and metering equipment at their plant	547.48	
Humphries & Sons Company, sale of one car of scraps	359.50	
Sundry power consumers, rental of meters for September, 1919	169.00	
Chicago Packing Company, being amount of charges received in re-routing secondary service	160.05	
J. Dittman, cost of raising and repairing wires at Central Park	150.00	
Chicago Surface Lines, for amount of charges incurred in readjusting our circuit 251, setting new pole and removing old pole from 39th and Ashland avenue, due to the same being in the way of our line	103.92	
Public Service Company of Northern Illinois—		
To cover cost of replacing pole	$ 28.42	
To cover charges incurred in making attachments and removing pole	32.75	
	61.17	
Leopold Cohn Iron Works, to cover charge incurred in re-routing secondary service at 31st street and Homan avenue	42.37	
Village of Summit, to cover cost of replacing transformer	42.03	
Village of Bellwood, to cover cost of transmission	19.54	
H. M. McKeever, to cover cost of removing temporary service	10.00	
Jacob Rueheimer, to cover cost of ten empty oil barrels	10.00	
R. W. Faupel, account of personal telephone calls	3.20	
H. Miller, installation of service	1.50	
John Hoyer, account of personal telephone calls	.65	
		82,727.66
Grand Total		$789,264.05

The above amount has been deposited with the Treasurer to the credit of The Sanitary District of Chicago and of the appropriate accounts as shown by attached receipt.

Respectfully submitted,

L. F. KING,
Clerk.

CHICAGO, October 16, 1919.

$789,264.05.

Received from Lawrence F. King, Clerk, the sum of seven hundred eighty-nine thousand, two hundred sixty-four and five hundredths ($789,264.05) dollars, on the dates and in amounts as follows:

September 2		$ 1,305.11
September 3		29.15
September 4		51.94
September 5		2,987.47
September 6		865.51
September 9		543.74
September 10		808.02
September 11		2,380.87
September 12		2,491.89
September 13		1,103.55
September 15		3,363.16
September 16		1,463.99
September 17		6,582.12
September 18		8,326.61
September 19		9,723.17
September 22		31,279.42
September 23	$ 3,062.74	
September 23	3,254.30	
		6,317.04
September 24		337.44
September 25		765.46
September 26		1,223.80
September 27		246.34
September 29		2,334.36
September 30	$700,000.00	
September 30	4,733.89	
		704,733.89
Total		$789,264.05

to be deposited to the credit of The Sanitary District of Chicago and of the following accounts:

County Collector	$700,000.00
Electrical Department	82,727.66
Land Revenue	2,360.50
A. Guthrie & Co.	2,954.63
Bills Receivable (United States Crushed Stone Co.)	333.33
Law Department	583.32
Pumping Stations, Maintenance and Operation	295.89
Illinois and Michigan Canal and Illinois River Conditions Department	6.67
Miscellaneous Engineering Operating Expense	2.05
Total	$789,264.05

GEORGE M. REYNOLDS,
Treasurer, The Sanitary District of Chicago.

REPORTS OF COMMITTEES.

(Continued.)

Engineering.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering respectfully reports that pursuant to its direction the Attorney has prepared a "History of the Growth and Development of the Sanitary District as shown by the decisions of courts of review and the work of the Law Department."

In Part 1 of said history the purpose, organization, boundaries, plans, development, works and benefits of the District as shown in and by the opinions of the courts are set forth under appropriate headings and in logical and chronological order with marginal notations indicating the subject matter of the text. All questions of practice and procedure have been eliminated from the opinions so that the language of the courts is so arranged and connected as to constitute an authentic history.

Part 2 contains tables, schedules and a synopsis of all work done by the Law Department since the organization of the District.

This information is contained in a typewritten volume of 350 pages, letter size, with an elaborate index. It will be useful to trustees, officers and employees of the District, State, County and City officials and of much value to other taxpayers who may desire reliable information as to the Sanitary District.

Your Committee is of the opinion that a reasonable number of printed copies of this volume should be procured by the Board.

By direction of your Committee, informal bids for printing and binding said volume were solicited by the Clerk, who received three informal bids and reported same to your Committee, which finds that Bentley, Murray & Company, printers and binders, is the lowest bidder, its bid being as follows:

For 1000 copies on paper 6"x 9", estimated to cover 256 pages, bound in paper, with side and backbone printed in black ink	$ 750.00
For 1500 additional copies, same binding and printing...	225.00
Said pages to be printed in 10 point type.	
For 500 copies of the above number bound in black imitation leather and stamped on side and backbone in gold leaf, after deducting the price of paper covers therefor, the sum of	687.50
Total for 500 copies bound in imitation leather and 2000 copies with paper binding..	$1662.50

Your Committee having considered the foregoing matter, recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to accept the foregoing bid of Bentley, Murray & Company to print 2500 copies of said volume of history, binding 500 copies thereof in black imitation leather, each stamped on side and backbone in gold leaf, and binding 2000 copies thereof in paper, with side and backbone printed in black ink, provided the total cost of said 2500 copies printed and bound as

hereinbefore described shall not exceed the sum of $1662.50.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler and Mueller—Six.

Nays—Messrs. Sergel and Nance—Two.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering reports that on September 18, 1919 (page 1170 of the Proceedings), the Electrical Engineer was authorized to accept an offer of Fairbanks, Morse & Company to furnish a platform scale of sufficient capacity to weigh material delivered by auto trucks or wagons to the Sanitary District at 31st street and Western avenue, for the sum of $645.00 and to either accept the offer of said company to furnish auxiliary steel therefor, for the sum of $291.20, or to purchase said steel in the open market provided that the cost thereof did not exceed said amount.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he states that he has received detailed drawings from said Fairbanks, Morse & Company, has made a complete estimate of what the installation of said scale would cost and has ascertained that a complete installation could not be made for less than $2500.00.

He further states that the purposes for which the scale is desired would not warrant such an expense and recommends that the authority for the purchase of said scale be rescinded.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the authority authorizing the Electrical Engineer to purchase said platform scale above specified, be and the same is hereby rescinded.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adpoted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering reports that on August 14, 1919, (page 1034 of the Proceedings) the Sanitary District entered into a contract with the Ready and Callaghan Coal Company, for the construction of a sprinkling filter with appurtenances

in the Village of Morton Grove which contract provides for the use of Continental No. 1 brick, for facing at $22.00 per thousand; that since the execution of said contract the price of said brick has advanced to $24.00 per thousand, and he requests authority to expend the extra sum of $42.00 to cover 21,000 bricks at the advance of $2.00 per thousand above specified.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the Chief Engineer be and he is hereby authorized and directed to expend the sum of $42.00 to cover the advance in the price of 21,000 bricks, as above specified.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Electrical Engineer, in which he states that the architect has reported to him that it is necessary to replace the frames of two windows on the switch board gallery and two windows on the main floor of the Power House, and that the work should be done at once.

He further states that he has received informal bids for doing said work and that the lowest is that of the J. C. MacFarland Company, of $464.00, and he recommends that said bid be accepted.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be and he is hereby authorized and directed to accept the bid of the J. C. MacFarland Company to replace the frames of said windows, for the sum of $464.00, and have said work done.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering reports that it has received a communication from the Chief Engineer in which he states that the concrete outfall on the south side of the

Calumet-Sag channel immediately west of the Wabash Railroad is in bad condition due to the collapse of the adjoining banks and that he has started the work of protecting same by excavating and backfilling thereunder. He estimates that the work will cost about $400.00 and requests that his action in doing said work be ratified and confirmed.

Your Committee having had the matter under consideration recommends the passage of the following order:

Ordered, That the action of the Chief Engineer in having the necessary work done to protect said outfall be, and the same is hereby ratified and confirmed and that he be authorized to complete said work provided that the expense thereof shall not exceed the sum of $400.00.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Clark presented the following report from the Committee on Engineering:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering reports that on September 18, 1919 (page 1175 of the Proceednigs), the Electrical Engineer was authorized to purchase in the open market for the lowest price obtainable three hydraulic rams to use in operating the head gates of Unit No. 6, at the Power House at Lockport, at a cost of not to exceed $500.00 each or a total of $1500.00.

Your Committee further reports that it has received a communication from the Electrical Engineer in which he states that after considerable difficulty he obtained quotations for said rams and that the lowest price received was that of William Heggie, of $1800.00, which is $300.00 in excess of the amount authorized by the Board, and he requests that he be authorized to expend said additional sum of $300.00 in the purchase of said rams.

Your Committee having considered the matter recommends the passage of the following order:

Ordered, That the Electrical Engineer be, and he is hereby authorized and directed to expend an additional sum of $300.00 over and above said sum of $1500.00 above specified for the purchase of said rams.

Respectfully submitted,

WALLACE G. CLARK,
Chairman.
H. E. LITTLER,
MATT A. MUELLER,
JAS. H. LAWLEY,
PATRICK J. CARR,
Committee on Engineering.

Mr. Clark moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Finance.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance reports that it has received requests from the Chief Engineer, the Attorney, the Clerk, and the Manager of the Department of Real Estate to make transfers of funds from various unexpended accounts to other accounts in order to provide funds for the payment of expenditures for which no appropriations have been made and to increase certain appropriations.

Your Committee having considered the matter is of the opinion that the requests should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby, authorized and directed to make the following transfers in appropriations for the year 1919, in accordance with the several requests of the heads of departments attached hereto.

No. 1. DEPARTMENT OF ENGINEERING.

From Account No. 29-64, repair and replacement service for channels, ditches, reservoirs and docks		$ 2,350.00
To the following accounts:		
No. 235, blue printing	$1,500.00	
No. 29-456, repair and replacement for valve and valve parts	300.00	
No. 29-512, repair and replacement service for machines and machine shop equipment	50.00	
No. 29-519, repair and replacement service for fixed plant equipment	500.00	
		2,350.00
From Account No. 341, chemical and laboratory supplies		100.00
To Account No. 39, supplies N. O. C.		100.00
From Account No. 511, fixed plant equipment		2,500.00
To Account No. 456, repair and replacement service of valve and valve parts		2,500.00
From Account No. 5273, floating equipment		250.00
To the following accounts:		
No. 554, engineering and drafting equipment	$200.00	
No. 5272, vehicle equipment not power driven	50.00	
		250.00
From Account No. 65M2556, Calumet Intercepting Sewer Contract No. 5		100,000.00
To Account No. 65M2060, Evanston Intercepting Sewer		100,000.00

No. 5. DEPARTMENT OF CLERK.

From Account No. 86, judgments and claims		$ 3,926.65
To the following accounts:		
No. 12, salaries and wages of temporary employes	$1,416.65	
No. 211, railroad and steamship transportation (other than local) of persons	25.00	
No. 212, local transportation of persons	450.00	
No. 213, railroad and steamship transportation of things	15.00	
No. 53, furniture and office equipment	100.00	
No. 2231, telephone service	$500.00	
No. 2232, telephone service	300.00	
		800.00
No. 282, towel and laundry service	100.00	
No. 283, water and ice service, main office	250.00	

No. 29-53, repair and replacement service (furniture and office equipment)	250.00	
No. 29-58, repairs and replacement service (equipment, N. O. C.)	10.00	
No. 311, office supplies	500.00	
No. 382, household supplies	10.00	
		3,926.65

No. 4. Department of Law.

From Account No. 211, railroad and steamship transportation (other than local) of persons .....$		771.65
To the following accounts:		
No. 234, photographing.	$198.00	
No. 289, impersonal service (N. O. C.).....	373.65	
No. 29-53, repair and replacement service (furniture and office equipment)	100.00	
No. 322, liquid fuel and illuminants	100.00	
		771.65

No. 7. Department of Real Estate.

From Account No. 831, taxes on Sanitary District property....$	820.19	
and		
Account No. 5271, motor vehicle equipment	54.50	
		874.69
To the following accounts:		
No. 211, railroad and steamship transportation (other than local) of persons....	125.00	
No. 233, printing and engraving, multigraphing and mimeographing	5.00	
No. 27, boarding and lodging	150.00	
No. 29-5271, repair and replacement service (motor vehicle equipment)	25.00	
No. 29-58, repair and replacement service equipment (N. O. C.)	10.00	
No. 311, office supplies.	150.00	
No. 322, liquid fuel and illuminants	75.00	
No. 363, lubricants.....	15.00	
No. 364, motor vehicle supplies	10.00	
No. 452, motor vehicle parts	150.00	
No. 58, equipment (N. O. C.)	11.05	
No. 853, auto insurance	90.00	
No. 854, fidelity insurance	58.64	
		874.69

Respectfully submitted,
Jas. H. Lawley,
Chairman.
Matt A. Mueller,
Willis O. Nance,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

Chicago, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

Gentlemen—Your Committee on Finance reports that the appropriation bill of the Sanitary District for the year 1919 (page 116 of the Proceedings) sets up under the title "Operation of Pumping Stations" for the Thirty-ninth Street Pumping Station, eleven items for salaries aggregating $59,612.00 and for the Lawrence Avenue Pumping Station, eight items aggregating $31,612.00 for salaries, which positions and salaries

are set forth in the order hereinafter shown in this report.

Your Committee further reports that the Committee on Employment, subsequent to the passage of the annual appropriation bill, made provision for increases in salaries and authorized additional positions, which will increase the amounts appropriated for salaries of regular employees of the Thirty-ninth Street and the Lawrence Avenue Pumping Stations in the sums of $10,050.00 and $6,849.00 respectively, and the Chief Engineer has requested that a transfer of $16,899.00 be made from Account No. 99—Contingencies, to cover said increases for a period of six months and for the additional positions authorized.

Your Committee having considered said request is of the opinion that same should be granted and therefore recommends the passage of the following order:

Ordered, That the Clerk be, and he is hereby authorized and directed to transfer the sum of $16,899.00 from Account No. 99—Contingencies to Account No. 11—Salaries and Wages of Regular Employees (Thirty-Ninth Street Pumping Station) $10,050.00, and to Account No. 11—Salaries and Wages of Regular Employees (Lawrence Avenue Pumping Station) $6,849.00, in accordance with the requirements of the Committee on Employment as follows:

DEPARTMENT OF ENGINEERING, ACCOUNT No. 11.

SALARIES AND WAGES OF REGULAR EMPLOYES (THIRTY-NINTH STREET PUMPING STATION.)

Change from:	
Engineer in charge, one at $3,000.00	$ 3,000.00
Machinist, one at union scale, $1,800.00	1,800.00
Stationary engineers, five at $1,800.00	9,000.00
Millwright, one at $1,680.00	1,680.00
Craneman, one at $2,100.00 (union scale)	2,100.00
Assistant craneman, one at $1,440.00	1,440.00
Boiler washer, one at $1,320.00	1,320.00
Fireman, four at $1,320.00	5,280.00
Oilers, eight at $1,320.00	10,560.00
Laborers, sixteen at $1,152.00	18,432.00
Steamfitters, two at union scale, $2,500.00	5,000.00
To	$59,612.00
Engineer in charge, one at $3,000.00, 6 months	$ 1,500.00
Engineer in charge, one at $3,600.00, 6 months	1,800.00
Machinist, one at union scale, $1,800.00, 6 months	900.00
Machinist, one at union scale, $2,496.00, 6 months	1,248.00
Stationary engineers, five at $1,800.00, 6 months	4,500.00
Stationary engineers, five at $2,460.00, 6 months	6,150.00
Millwright, one at $1,680.00	1,680.00
Craneman, one at union scale, $2,100.00, 6 months	1,050.00
Craneman, one at union scale, $2,496.00, 6 months	1,248.00
Assistant craneman, one at $1,440.00, 1 month	120.00
Boiler washer, one at $1,320.00, 6 months	660.00
Boiler washer, one at $1,680.00, 6 months	840.00
Fireman, four at $1,320.00, 6 months	2,640.00
Fireman, four at $1,680.00, 6 months	3,360.00
Oilers, eight at $1,320.00, 6 months	5,280.00
Oilers, nine at $1,680.00, 6 months	6,720.00
Oilers, three at $1,680.00, 4½ months	1,890.00
Laborers, sixteen at $1,152.00, 6 months	9,216.00
Laborers, twenty-two at $1,260,000, 6 months	13,860.00
Steamfitters, two at union scale, $2,500.00	5,000.00
	$68,662.00

DEPARTMENT OF ENGINEERING, ACCOUNT No. 11.

SALARIES AND WAGES OF REGULAR EMPLOYES (LAWRENCE AVENUE PUMPING STATION)

Change from:

Engineer in charge, one at $2,400.00	$ 2,400.00
Stationary Engineers, three at $1,800.00	5,400.00
Oilers, five at $1,320.00	6,600.00
Fireman, four at $1,320.00	5,280.00
Boiler Washer, one at $1,320.00	1,320.00
Cribkeeper, one at $1,200.00	1,200.00
Laborers, six at $1,152.00	6,912.00
Steamfitters, one at union scale, $2,500.00	2,500.00
	$31,612.00

To:

Engineer in charge, one at $3,000.00, 6 months	1,500.00
Engineer in charge, one at $3,600.00, 6 months	1,800.00
Machinist, one at union scale, $1,800.00, 6 months	900.00
Machinist, one at union scale, $2,496.00, 6 months	1,248.00
Stationary Engineers, five at $1,800.00, 6 months	4,500.00
Stationary Engineers, five at $2,460.00, 6 months	6,150.00
Millwright, one at $1,680.00	1,680.00
Craneman, one at union scale, $2,100.00, 6 months	1,050.00
Craneman, one at union scale, $2,496.00, 6 months	1,248.00
Assistant Craneman, one at $1,440.00, 1 month	120.00
Boiler Washer, one at $1,320.00, 6 months	660.00
Boiler Washer, one at $1,680.00, 6 months	840.00
Fireman, four at $1,320.00, 6 months	2,640.00
Fireman, four at $1,680.00, 6 months	3,360.00
Oilers, eight at $1,320.00, 6 months	5,280.00
Oilers, nine at $1,680.00, 6 months	6,720.00
Oilers, three at $1,680.00, 4½ months	1,890.00
Laborers, sixteen at $1,152.00, 6 months	9,216.00
Laborers, twenty-two at $1,260.00, 6 months	13,860.00
Steamfitters, two at union scale, $2,500.00	5,000.00
	$38,461.00

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel Carr, Healy, Lawley Littler, Mueller and Nance—Seven.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance reports that the semi-annual interest on the thirtieth issue of bonds of the Sanitary District, amounting to the sum of fifty-four thousand ($54,000.00) dollars, will fall due October 25, 1919, and recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Sanitary District and the Clerk be, and they are hereby authorized to draw a warrant payable to the order of the Treasurer of The Sanitary District of Chicago, for the sum of Fifty-four thousand ($54,000.00) dollars, to pay the semi-annual

interest due October 25, 1919, on two million seven hundred thousand ($2,700,000.00) dollars of the thirtieth issue of bonds at 4 per cent per annum.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance reports that it has received a communication from the Chief Engineer in which he states that he has included an item in the annual appropriation bill of the Sanitary District for the year 1919, of $2,000.00 for steel map cases, with which he intends to replace the present wooden cases in the vault of his department; that he had prepared a design for said fixtures which he desired to have installed progressively so as to permit the changing of the records from the old to the new cases with as little inconvenience with the work as possible and requests authority to purchase these units as required, none of which will cost more than $500.00.

Your Committee having considered the matter, recommends the passage of the following order:

Ordered, That the Chief Engineer be, and he is hereby, authorized and directed to purchase said steel map cases as required, provided that the total cost thereof shall not exceed $2,000.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance reports that it has received a request from the Attorney for authority to purchase a winter top, to be installed on the automobile used by the Claim Division of his department.

He further states that he has received prices from various concerns for furnishing said top, the lowest of which was that of the France Auto Top Company of $157.00.

Your Committee having considered the matter is of the opinion that said request should be granted and therefore recommends the passage of the following order:

Ordered, That the Attorney be, and he is hereby, authorized to purchase a top for said automobile, provided that the cost shall not exceed $157.00.

Respectfully submitted,
JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Lawley presented the following report from the Committee on Finance:

CHICAGO, October 16, 1919.

To the Honorable, the President and Baord of Trustees of The Sanitary District of Chicago.

GENTLEMEN—Your Committee on Finance begs to submit herewith the following vouchers for payments on sundry contracts and for miscellaneous services and supplies, and recommends that they be approved and ordered paid:

General Payroll First Half of October, 1919.

L. F. King, Clerk (general payroll)	$ 31,815.52

Construction Account.

L. F. King, Clerk (expenses of employes)	$ 243.48	
L. F. King, Clerk (recording deed)	2.15	
A. Guthrie & Co. (labor and material furnished on account of Grand Trunk Western Ry. bridge)	1,610.57	
A. Guthrie & Co. (labor and material, Chicago St. bridge, Stony Creek diversion)	11.59	
A. Guthrie & Co. (labor and material, Canal St. bridge, Stony Creek diversion)	8.70	
A. Guthrie & Co. (labor and material on account of B. & O.-C. T. R. R. bridge)	1,388.19	
Nash Bros. (labor and material on account of Desplaines river intercepting sewer)	785.40	
L. F. King, Clerk (expenses of employe)	48.64	
Baltimore & Ohio-Chicago Terminal R. R. (repairs to track and trestle at B. & O. crossing in Blue Island)	824.30	
Rogers & Hall Company (proposal books)	447.23	
E. A. Hanrahan (fill north drainage ditch across Bill Henry road, etc.)	447.00	
E. A. Hanrahan (placing rip-rap at end of Flume Section 9)	420.00	
E. A. Hanrahan (placing rip-rap at south end Flume)	360.00	
Sanborn Company (automatic gages)	440.00	
J. W. Landis Mill Company (supplies)	150.00	
Sterling Lumber & Supply Company (stakes)	84.00	
Chicago Telephone Company (telephone services)	79.75	
J. W. Landis Mill Company (pine stakes and cartage charges	65.00	
American Telephone & Telegraph Company (labor and material)	61.30	
McCallum & Clark (rent)	25.00	
Evening American Publishing Company (advertising)	19.80	
Modjeski & Angier (inspecting reinforcing steel)	14.07	
ulien P. Friez & Sons (register pens)	7.50	
eth & Goeler (repairs)	6.50	
ublic Service Company of Northern Illinois (lighting services)	.50	
		7,550.67
Amount carried forward		$ 39,366.19

Amount brought forward.....$ 39,366.19

Maintenance and Operation Account.

L. F. King, Clerk (freight charges on fuel, I. C. R. R., 39th St. Pumping Station).....$	427.18	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., 39th St. Pumping Station).....	318.22	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., 39th St. Pumping Station).....	351.62	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., 39th St. Pumping Station).....	232.73	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., 39th St. Pumping Station).....	86.80	
Sangamon County Mining Company (coal, 39th St. Pumping Station).....	3,978.56	
The Jeffrey Mfg. Company (crusher frame, 39th St. Pumping Station).....	182.00	
Lynch-Clarisey Company (supplies, 39th St. Pumping Station).....	126.75	
H. W. Johns-Manville Company (cement, etc., 39th St. Pumping Station).....	65.95	
Keuffel & Esser Company (planimeter and slide rule, 39th St. Pumping Station).....	54.50	
American Engineering Company (lower rams, 39th St. Pumping Station).....	52.00	
Kellogg-Mackay Company (supplies, 39th St. Pumping Station).....	49.20	
United Asbestos & Packing Company (Nye-Die and ratchet stock, 39th St. Pumping Station).....	35.00	
Scott Valve Mfg. Company (safety valve spring, 39th St. Pumping Station).....	32.70	
United Asbestos & Packing Company (packing, etc., 39th St. Pumping Station).....	29.40	
H. W. Johns-Manville Company (steam trap, 39th St. Pumping Station).....	26.00	
Wilbur J. Connell (wrenches and drills, 39th St. Pumping Station).....	25.10	
The Kellogg-Mackay Company (red flanges, etc., 39th St. Pumping Station).....	23.16	
The Kellogg-Mackay Company (globe valves, 39th St. Pumping Station).....	22.80	
Barrett-Christie Company (globe valve, 39th St. Pumping Station).....	22.00	
Hinckley & Schmitt (drinking water, 39th St. Pumping Station).....	17.00	
The Lunkenheimer Company (repairs to valves, 39th St. Pumping Station).....	15.41	
The Black Diamond (advertising, 39th St. Pumping Station).....	11.00	
Stebbins Hardware Company (padlocks, etc., 39th St. Pumping Station).....	9.93	
Standard Oil Company (kerosene, 39th St. Pumping Station)	7.25	
A. Daigger & Co. (supplies, 39th St. Pumping Station).....	4.20	
The Kellogg-Mackay Company (black bushings, 39th St. Pumping Station).....	1.20	
L. F. King, Clerk (freight charges on fuel, C. & E. I., Lawrenve Ave. Pumping Station).....	148.16	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., Lawrence Ave. Pumping Station).....	92.44	
L. F. King, Clerk (freight charges on fuel, I. C. R. R., Lawrence Ave. Pumping Station).....	92.36	
Amount carried forward.....$	6,545.62	$ 39,366.19

Amounts brought forward	$ 6,545.62	$ 39,366.19
L. F. King, Clerk (freight charges on fuel, C. & E. I., Lawrence Ave. Pumping Station)	92.12	
L. F. King, Clerk (freight charges on fuel, C. & E. I., Lawrence Ave. Pumping Station)	80.98	
Henry M. Joda (repairs, Lawrence Ave. Pumping Station)	134.04	
Lynch-Clarisey Company (supplies, Lawrence Ave. Pumping Station)	41.63	
The Hill Pump & Valve Company (repairs, Lawrence Ave. Pumping Station)	18.15	
S. Stanley Hart (boat services, Lawrence Ave. Pumping Station)	150.00	
S. Stanley Hart (boat services, Lawrence Ave. Pumping Station)	150.00	
Passavant Memorial Hospital (personal injuries account, Lawrence Ave. Pumping Station)	21.15	
Worthington Pump & Machinery Corporation (repairs, Lawrence Ave. Pumping Station)	13.81	
Kirby Motor Trucking Company (cartage charges, Lawrence Ave. Pumping Station)	12.00	
Worthington Pump & Machinery Corporation (supplies, Lawrence Ave. Pumping Station)	9.60	
United Asbestos & Packing Company (parts for lubricator, Lawrence Ave. Pumping Station)	8.75	
Kirby Motor Trucking Company (motor trucking, Lawrence Ave. Pumping Station)	7.22	
Geo. B. Carpenter & Co. (wood blocks, Lawrence Ave. Pumping Station)	2.79	
Green Engineering Company (supplies, Lawrence Ave. Pumping Station)	2.02	
Stebbins Hardware Company (cap bolts, Lawrence Ave. Pumping Station)	.40	
L. F. King, Clerk (special roll, 39th St.)	144.00	
L. F. King, Clerk (twenty-five railroad tickets)	23.76	
Abe Burrell & Co. (labor and material repairing scows)	3,887.55	
Consolidated Company (cement)	306 08	
Consolidated Company (cement)	306 08	
Consolidated Company (cement)	306.08	
Consolidated Company (cement)	306.08	
E. Tillman (teaming charges)	223.30	
Jos. T. Ryerson & Son (repairing outfall, North Shore Channel)	169.03	
Consumers Company (sand, gravel and cement)	122 85	
Jos. T. Ryerson & Son (wire spikes, etc.)	103.57	
Fred Zenk (meals and lodging)	92.30	
Fred Zenk (meals and lodging)	57.85	
David G. Murray (teaming)	90 00	
Edw. M. Howard (work on McFarlan car)	87.95	
The Thos. F. Ryan Company (repairs to 9th street bridge)	69.60	
Edward Heinz (repairs to bridges)	63.00	
McGrath Sand & Gravel Company (sand)	61.99	
Consumers Company (sand and gravel)	53.57	
Miller Hardware Company (oil, spikes and bolts)	50.66	
Sullivan Diving, Wrecking & Salvage Company (diving and cartage)	47.00	
The Wm. H. Reid Company (creosote oil)	43.66	
Burr-Vack Company (pencils, etc.)	43 00	
Lawrence Kirk (livery service)	42.00	
George Irmiters (teaming)	33.60	
Albert Hancock & Co. (time books)	33.00	
Keuffel & Esser Company (gross sect. cloth)	30.60	
Amounts carried forward	$ 14,088.24	$ 39,366.19

Amounts brought forward	$ 14,088.24	$ 39,366.19
Dan Smith Motor Company (one left front fender for car)	22.50	
Augusta Schwarz (rent)	22.00	
The Texas Company (gasoline)	21.72	
Orrin Eames (rent)	20.00	
North Shore Hardware Company (hardware supplies)	17.95	
Keuffel & Esser Company (tapes, ranging poles, etc.)	15.00	
The Chicago Evening Post Company (advertisement)	13.80	
American Society for Testing Materials	11.00	
Wm. O'Connell (shovels, etc.)	10.20	
The Texas Company (gasoline)	10.18	
Herman H. Hetter Lumber Company (lumber)	7.84	
Sweet-Wallach Company (photographic supplies)	7.70	
Burr-Vack Company (proposal books and gum patches)	4.42	
Miller Hardware Company (tools)	1.65	
Stewart-Warner Speedometer Corporation (installing pinion)	1.20	
Jos. T. Ryerson & Son (repairs to floor plates)	.69	
Peth & Goeler (repairs to chain tape)	.50	
Public Service Company of Northern Illinois (electrical energy)	.50	
		14,277.09
I. and M. Canal and Illinois River Conditions Department.		
Lewis Roberts (watchman services)	$ 100.00	
John Naghten & Co. (insurance)	48.50	
Hotel Atlantic (lodging for Heilbron and Dugan)	34.35	
Standard Oil Company (gasoline)	19.71	
Peoples Telephone Company (telephone service)	16.90	
G. Cramer Dry Plate Company (photographic plates)	15.89	
G. Gramer Dry Plate Company (express charges on plates)	1.59	
H. & E. F. Hunter (lumber)	15.88	
Chillicothe Hardware Company (washers, etc.)	8.33	
Public Service Company of Northern Illinois (gas service)	6.50	
E. H. Heilbron (expenses of employes)	629.29	
Taylor House (meals for employes)	2.40	
G. & K. Plumbing Company (lamp cord)	1.50	
George C. Gleason (metal polish, etc.)	1.45	
		902.29
Law Department.		
L. F. King, Clerk (expenses of employe)	$ 20.07	
L. F. King, Clerk (expenses of employe)	18.60	
Martin Delaney (services rendered and expenses incurred)	187.31	
L. F. King, Clerk (expenses of employe)	29.03	
L. F. King, Clerk (transcript of record paid Clerk of Circuit Court)	11.50	
		266.51
Clerical Department.		
Southwest Printing Company (printing)		40.00
Real Estate Department.		
S. B. Scott (cutting and destroying Canadian thistles)	$ 10.00	
G. & S. Motor Company (touring car)	645.50	
G. & S. Motor Company (spotlight, security lock, etc.)	105.40	
Illinois Automobile Insurance Association (insurance)	79.23	
Acme Telephone Bracket Company (arm telephone bracket)	5.50	
		945.63
Amount carried forward		$ 55,797.71

Amount brought forward		$ 55,797.71
Police Department.		
L. F. King, Clerk (expenses fo employes)	$ 8.52	
Abe Burrell & Co. (labor and material on police boat)	425.00	
Geo. B. Carpenter & Co. (red and black packing)	54.54	
Kahlenberg Bros. Company (supplies for machinery on police boat)	35.03	
The C. H. Hanson Company (nickel plated stars)	12.50	
Western Sign Ad. Company (lettering police boat)	16.00	
The Fred J. Ringley Company (printing)	7.50	
		559.09
General Account.		
L. F. King, Clerk (twenty-five ride ticket)	$ 15.44	
Francis C. Shenehon (professional services and expenses incurred in connection with regulation of the Niagara and St. Lawrence Rivers Controversy)	5,805.37	
Standard Oil Company (rent of main office ,etc.)	2,631.54	
Edmund D. Adcock (professional services re Lake Level Controversy)	1,150.00	
J. L. Jacobs & Co. (services and expenses in connection with investigations and classification, etc.)	795.67	
J. L. Jacobs & Co. (services and expenses in connection with investigation, etc.)	268.84	
Fred Klein Company (printing Proceedings)	150.00	
Hinckley & Schmitt (drinking water)	85.00	
Commonwealth Edison Company (Mazda lamps)	27.65	
Parker's Towel Supply Company (towel service)	26.00	
Fred Klein Company (printing Proceedings)	5.00	
20th Century Press Clipping Bureau (clippings)	4.00	
		10,964.51
Electrical Department.		
L. F. King, Clerk (postage stamps)	$ 70.00	
L. F. King, Clerk (expenses of employe)	7.03	
L. F. King, Clerk (expenses of employes)	6.44	
L. F. King, Clerk (twenty-five ride ticket)	4.35	
L. F. King, Clerk (expenses of employe)	3.92	
L. F. King, Clerk (water taxes)	3.75	
General Electric Company (lead covered cable)	6,322.78	
General Electric Company (lead covered cable)	4,626.19	
General Electric Company (lead covered cable)	861.00	
General Electric Company (current transformers ,etc.)	147.15	
Standard Underground Cable Company (strand 3 brd. wpf. wire)	490.99	
Commonwealth Edison Company (wattmeters)	452.40	
Commonwealth Edison Company (current transformers)	308.80	
Commonwealth Edison Company (current transformers)	176.40	
Union Petroleum Company (gasoline)	405.30	
Union Petroleum Company (gasoline)	279.30	
Union Petroleum Company (gasoline)	270.90	
Union Petroleum Company (gasoline)	257.25	
Murphy Plumbing Company (fire hydrant, etc.)	404.05	
Jeffery Dewitt Insulator Company (J-D units)	385.35	
Jeffery Dewitt Insulator Company (J-D units)	289.70	
Kellogg-Mackay Company (black pipe, etc.)	322.69	
Kellogg-Mackay Company (unions and couplings)	11.53	
Standard Underground Cable Company (wire)	319.27	
The Ohio Brass Company (insulators)	280.78	
Amounts carried forward	$ 16,707.32	$ 67,321.31

Amounts brought forward	$ 16,707.32	$ 67,321.31
Fairbanks-Morse & Co. (scale)	245.00	
H. M. Hooker Glass & Paint Company (white lead in oil)	234.65	
H. M. Hooker Glass & Paint Company (boiled oil)	132.34	
H. M. Hooker Glass & Paint Company (boiled oil)	117.76	
The Republic Rubber Compnay (staggard clin. tires)	216.03	
Western Electric Company (wattmeters)	212.25	
Joliet Machine Shop (taper shifting ring pins)	196.30	
S. & L. Motor Company (overhauling motor, transmission, etc.)	183.19	
L. F. King, Clerk (expenses of employes)	561.62	
L. F. King, Clerk (semi-monthly roll for first half of October)	18,666.84	
Mercy Hospital (personal injuries account)	182.50	
A. L. Kelly (personal injuries compensation)	96.00	
Thos. F. Plunkett (personal injuries account)	84.00	
Monarch Electric & Wire Company (wire)	33.49	
United Asbestos & Packing Company (emery cloth)	14.65	
American Blue Print Paper Company (blue prints)	7.30	
Barrett Hardware Company (hex. cap screws, etc.)	7.28	
Conklin, Price &Webb (bond of Jacob Ruehmann)	5.79	
Westinghouse Electric & Mfg. Company (switches)	5.48	
Excelsior Wrapper Company (five bales excelsior)	5.36	
Paul Erickson (grinding stone)	5.00	
Air Reduction Sales Company (refilling auto tanks)	5.00	
Jacob H. Koerner (cartage charges)	5.00	
Auto Radiator Mfg. Company (radiator repaired)	5.00	
Addressograph Company (complete addresses)	4.37	
L. Gould & Co. (white toilet paper)	3.75	
Kirby Motor Trucking Company (truck service)	4.00	
United States Crushed Stone Company (telephone calls)	3.70	
Westinghouse Electric & Mfg. Company (bearings)	3.62	
New York Belting & Packing Company (thread brass increaser)	3.00	
S. & L. Motor Company (pistons)	3.00	
Joliet Transfer Company (cartage charges)	3.00	
Marshall Field & Co. (towels)	3.00	
The Rayfield Agency (repairs)	2.98	
The Essenkay Products Company (repairs to tire)	2.50	
Canedy-Otto Mfg. Company (set of ball bearings complete)	2.81	
Stewart-Warner Speedometer Corporation (sliding bars)	2.16	
A. Kutscha & Co. (wrenches)	2.08	
The Linde Air Products Company (refilling tank)	1.65	
Wilbur J. Connell (nails, etc.)	154.07	
Wilbur J. Connell (cap screws)	85.97	
Bentley-Murray & Co. (printing)	154.00	
Rex Rubber Tire Company (rugged tires)	153.90	
Monarch Electric & Wire Company (lag screw pins, etc.)	117.50	
Monarch Electric & Wire Company (carbon brushes, etc.)	92.50	
The Texas Company (Nabob oil)	112.72	
The Texas Company (oil and gasoline)	47.28	
The Texas Company (oil and gasoline)	16.31	
Consumers Company (stone, sand and cement)	109.25	
Rex Rubber Tire Company (rugged tires)	106.02	
Trumbull Waste Mfg. Company (white cotton waste)	101.36	
A. Leschen & Sons Rope Company (manila rope, etc.)	90.00	
Stebbins Hardware Company (screw drivers, etc.)	85.85	
Chicago Pneumatic Tool Company (electric drill)	85.00	
Electric Engineers Equipment Company (insulator supports)	84.50	
The Wm. H. Reid Company (oil)	72.93	
Amounts carried forward	$ 39,649.93	$ 67,321.31

Amounts brought forward	$ 39,649.93	$ 67,321.31
Rex Rubber Tire Company (tubes repaired, etc.)	68.05	
The Lombard Governor Company (repairs on relay valve)	62.01	
Becker Bros. (repairing generator, etc.)	59.51	
Crocker-Wheeler Company (Wheeler motor)	59.17	
Fuller-Mmorrison Company (muriatic acid and stearline)	58.87	
National Lead Company (genuine rabbit metal)	57.82	
Michigan Tire Company (repairing casings and inner tubes)	57.75	
Electrical Engineers Equipment Company (insulators, supports)	57.50	
The Grasselli Chemical Company (com'l. carboys, etc.)	54.08	
H. Channon Company (angle valves, etc.)	53.00	
Belden Mfg. Company (wire)	52.76	
Trumbull Waste Mfg. Company (wiping rags)	52.51	
L. L. Fleig & Co. (paper)	50.35	
L. L. Fleig & Co. (yellow and black varnish cloth)	46.06	
L. L. Fleig & Co. (varnish)	10.55	
Albert Hancock & Co. (rubber bands, etc.)	48.69	
L. Wolff Mfg. Company (plumber furnace, less solder pots)	46.74	
Burr-Vack Company (pencils, etc.)	44.38	
Burr-Vack Company (envelopes, etc.)	17.61	
Thomas F. Plunkett (personal injuries)	42.00	
A. L. Kelly (personal injuries compensation)	42.00	
Fischer & Hayes Rope & Steel Company (manila rope)	41.31	
Standard Oil Company (gasoline and oil)	40.09	
Chas. E. Graves & Co. (stop watch for testing meters)	40.00	
Westinghouse Electric & Mfg. Company (metal washers, etc.)	38.48	
Southwest Printing Company (printing)	37.50	
Delta Star Electric Company (disconnecting switches)	36.99	
Standard Oil Company (gasoline and oil)	33.92	
Charles E. Graves & Co. (stop watches for testing meters)	33.00	
Mathias Klein & Sons (tool belts, etc.)	32.70	
Riddiford Bros. (varnish, etc.)	31.50	
Advance Packing & Supply Company (metallic tubing)	30.38	
Northern Rubber Company (casings and inner tubes repaired)	29.75	
Vesta Accumulator Company (battery, etc.)	29.69	
Steele-Wedeles Company (soap and coffee, operating Robert "R" boat)	27.28	
Humphrey & Sons Compnay (steel sleeve nuts, etc.)	27.28	
The Lombard Governor Company (repairs on governor)	26.21	
International Harvester Company of America (repairs to machines)	25.41	
A. C. Miller (gasoline)	25.30	
Theo. B. Robertson Products Company (soap powder, etc.)	24.01	
Hydrox Company (drinking water)	24.00	
Lynch-Clarisey Company (Peerless tallow compound)	24.00	
Wadsworth-Howland Company (enamel)	23.76	
United Asbestos & Packing Company (leather belt, etc.)	22.57	
Southwest Printing Company (printing)	21.00	
United Asbestos & Packing Company (packing)	20.99	
The Lord &Bushnell Company (lumber)	20.90	
Central Scientific Company (thermometers)	18.95	
Central Electric Company (armored lighting cable, etc.)	18.22	
Henry Stuckart (Yale padlocks)	17.75	
Cameron-Amberg & Co. (O. K. fastener)	16.10	
The Keith Lumber Company (lumber)	14.00	
City of Chicago—Bureau (water taxes)	13.75	
Amounts carried forward	$ 41,558.13	$ 67,321.31

Amounts brought forward	$ 41,558.13	$ 67,321.31
Staehley Bros. (tire cement, etc.)	13.60	
Parker's Towel Supply Company (towel service)	13.50	
Geo. B. Carpenter & Co. (tarred marline)	13.50	
Jos. T. Ryerson & Son (tank steel)	12.77	
Norris Ward Coal Company (coal)	12.50	
City of Chicago—City Collector (inspection charges)	10.50	
Schweitzer & Conrad (lamps)	10.30	
Jas. B. Clow & Sons (black ells, etc.)	9.72	
Joliet Transfer Company (hauling charges)	9.00	
Albert Hancock & Co. (gummed labels)	9.00	
A. J. Schindler Company (steel coupling and stuffing nut box)	8.70	
International Time Recording Compnay (time slips)	8.19	
Garden City Spring Works (replacing broken spring)	7.75	
Overland Motor Company (thumb nuts and caps, etc.)	7.65	
Overland Motor Compnay (L. H. axle shaft)	7.50	
Humphrey & Sons Company (piston rings for air cylinder machining five nickel steel bushings)	462.15	
		42,174.46

Miscellaneous Accounts.

L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 147.40		
Maintenance and Operation Account	66.80		
General Account	5.11		
		$ 219.31	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 70.88		
Maintenance and Operation Account	48.51		
		119.39	
L. F. King, Clerk (expenses of employes)—			
Construction Account	$ 39.51		
Maintenance and Operation Account	59.67		
		99.18	
L. F. King, Clerk (expenses of employes)—			
Maintenance and Operation Account	$ 3.45		
Clerical Department	14.80		
Electrical Department	.77		
		19.02	
H. Stanley Hart (services of boat and operator)—			
Construction Account	$ 30.00		
Maintenance and Operation Account	120.00		
		150.00	
Chicago Telephone Company (telephone service)—			
Construction Account	$ 20.75		
Maintenance and Operation Account	54.39		
Police Department	.60		
Electrical Department	1.00		
		76.74	
			683.64
Grand Total			$110,179.41

Respectfully submitted,

JAS. H. LAWLEY,
Chairman.
MATT A. MUELLER,
CHAS. H. SERGEL,
Committee on Finance.

Mr. Lawley moved that the report be adopted and the accompanying vouchers be approved and ordered paid.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Electrical Development.

Mr. Littler presented the following report from the Committee on Electrical Development:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Electrical Development herewith presents a contract with John J. Dondera, 6824 Windsor Ave., Berwyn, Illinois, wherein the Sanitary District agrees to furnish and said party agrees to take electrical energy for the period of time and upon the terms and conditions therein set forth. Said contract has been approved by the Electrical Engineer.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute in duplicate the attached contract with John J. Dondera, which has heretofore been executed by him.

Respectfully submitted,

H. E. LITTLER,
Chairman.
WALLACE G. CLARK,
WM. J. HEALY,
MATT. A. MUELLER,
Committee on Electrical Development.

Mr. Littler moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Real Estate Development.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Real Estate Development transmits herewith a form of lease between the Sanitary District and the Western Quarries Company, whereby the Sanitary District leases to said company part of the right of way of the Sanitary District located in Sections 15, 16, and 21, township 37 north, range 11, east of the third principal meridian, lying southerly of a line parallel to and 200 feet distant from the southerly edge of the Main Channel; situated in the Counties of Cook and Du Page containing 22.64 acres more or less, for a term beginning February 1, 1920 and ending January 31, 1923 at an annual rental $113.20. The lease provides for the payment by said company, of all taxes assessed against said property.

Your Committee further reports that the form of said lease has been approved by the Attorney and therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby, authorized and directed to execute the form of lease herewith submitted with the Western Quarries Company, the

same having been duly executed by said company.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
WALLACE G. CLARK,
WM. J. HEALY,
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Real Estate.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Real Estate Development transmits herewith form of leases to be entered into between the Sanitary District and the following parties:

1. Joseph Jezisik, of tract 242A, in Haase and Marrs Subdivision, in Blue Island, Illinois, containing 1.18 acres more or less, from October 1, 1919, to September 30, 1922, at an annual rental of $5.90 amounting to $17.70 for the three year term.

2. Joseph Jezisik, of tract 104, 105 and 106 in the S.½, of Section 34, Township 37, North Range 13, East of the Third Principal Meridian, on the South Side of the Calumet Sag Right of Way, of The Sanitary District of Chicago, containing approximately 13.10 acres of tillable and 1.51 acres of grazing land from October 1, 1919 to September 30, 1922, at an annual rental of $68.02 amounting to $204.06 for the three year term.

3. Fred Wolff, of tracts 238 and 241, in Haase and Marrs Subdivision in Blue Island, Illinois, containing 5.45 acres of tillable land, from October 1, 1919 to September 30, 1922, at an annual rental of $27.25 or a total of $81.75 for the three year term.

4. Lola B. Willis, of tract 115, in the S. E.¼ of Sec. 35, Township 37, North Range 13, on the North Side of the Calumet Sag Channel between Homan and Kedzie Avenue, containing 5.51 acres of tillable land from September 1, 1919 to August 30, 1922, at an annual rental of $27.55, making a total of $82.65 for the three year term.

Your Committee reports that said leases are in the usual form and provides that the Sanitary District may terminate the same by giving thirty days notice in writing to said tenants of its intention so to do, in the event that it desires to use said land for any of its corporate purposes.

Your Committee therefore recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District, and the Clerk be, and they are hereby, authorized and directed to execute the forms of leases herewith submitted, the same having been executed by said lessees.

Respectfully submitted,
PATRICK J. CARR,
Chairman.
WALLACE G. CLARK,
WM. J. HEALY,
MATT A. MUELLER,
WILLIS O. NANCE,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Sergel, Carr, Clark, Healy, Lawley, Littler, Mueller and Nance—Eight.

Nays—None.

Mr. Carr presented the following report from the Committee on Real Estate Development:

CHICAGO, October 16, 1919.

To the Honorable the President and the Board of Trustees of The Sanitary District of Chicago:

GENTLEMEN—Your Committee on Real Estate Development transmits herewith a form of lease between the Sanitary District and Frances M. Barton, Chicago, Illinois, of

The south one hundred twenty-five (125) feet (measured at right angles to the center line of the Main Channel of The Sanitary District of Chicago) of lots twenty-two (22) and twenty-four (24) of Sanitary District Trustees' Subdivision of Right-of-way from the north and south center line of Section thirty (30) township thirty-nine (39) north, range fourteen (14) east of the third principal meridian, to the Will County line, said property being situated in Section thirty-five (35) township thirty-nine (39) north, range thirteen (13) east of the third principal meridian in the City of Chicago, County of Cook, State of Illinois, and containing four (4) acres, more or less;

for a term of 99 years beginning November 1, 1919. The annual rentals to be paid are as follows:

For the first 5 years of said term the sum of $6,026.25; for the succeeding 15 years the sum of $19,886.55; for the succeeding 30 years the sum of $43,388.70 and for the last 49 years the sum of $76,773.69.

The lease provides that said lessee will within three years from the date thereof erect on the south 100 feet of said demised premises (except portion reserved for a railroad of-way), buildings which shall cost not less than $10,000.00; that he shall pay all taxes and assessments, and contains special provisions relative to the removal of spoil, insurance of buildings, reservation of a railroad right-of-way and the furnishing of a bond in the sum of $10,000.00 as security for the faithful performance of the conditions of said lease relating to the erection of buildings.

Your Committee further reports that the form of said lease has been approved by the Attorney, and therefore, recommends the passage of the following order:

Ordered, That the Chairman of the Committee on Finance of the Board of Trustees of the Sanitary District and the Clerk be, and they are hereby authorized and directed to execute in duplicate the form of lease above specified, the same having been duly executed by said Lessee.

Respectfully submitted,

PATRICK J. CARR,
Chairman.
WALLACE G. CLARK,
WM. J. HEALY,
MATT A. MUELLER,
Committee on Real Estate Development.

Mr. Carr moved that the report be adopted and the accompanying order passed.

On roll call the motion was carried by the following vote:

Yeas—Messrs. Carr, Clark, Healy, Lawley, Littler and Mueller—Six.

Nays—Messrs. Sergel and Nance—Two.

ADJOURNMENT.

Mr. Littler moved that the Board adjourn.

The motion prevailed.

L. E. Kunz
Clerk.